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ADVANCED

# MANAGEMENT

FEBRUARY 1958
VOLUME 23 No. 2

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3rd Annual
**OPERATIONS RESEARCH**
**Conference**
February 6-7

•

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## *In This Issue . . .*

We Should Extend Incentives — ***Phil Carroll***

Case Study Of A Work Simplification Team — ***Robert G. Murdick***

Group Influence On Technological And Organizational Change — ***John D. Stanley***

A Job Review Plan For A Research And Development Business — ***Simon J. Rasch and William N. Mendell***

Communication Practices Of Supervisors In A Mid-Western Corporation — ***D. T. Piersol***

American Business Is NOT Efficient — ***Clifton Bruce***

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ADVANCED MANAGEMENT, published monthly by the Society for the Advancement of Management, Inc., 74 Fifth Avenue, New York 11, N. Y., is successor to The Society for the Advancement of Management Journal, the Bulletin of the Taylor Society and of The Society of Industrial Engineers. Reentered as second-class matter, December 23, 1949, at the Post Office at New York, N. Y., under the Act of March 3, 1879. Copyright, 1957, Society for Advancement of Management. Permission must be obtained for reprinting, digesting, or quotation. Subscription rates: $8.00 per year. Single copies: 75 cents (members); $1.00 (non-members). All members receive this publication, for which $4.00 of their dues is allocated. Reprints of articles readily available in quantity, price schedule on request. An index to ADVANCED MANAGEMENT is published annually, and the contents are also indexed in industrial Arts Index, available at Public Libraries. Notification of address changes must be given four weeks in advance.

The editor will be pleased to review manuscripts submitted for publication, but will not be responsible for loss in transit, safe custody or otherwise.

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# Committees, Committees, Committees!

THE CONTROVERSY over the effectiveness of committees rages on through the years. Some executives operate successfully with committees, while others regard them as a menace to the managerial process. Perhaps it would be well to define exactly what we mean by the term. Webster's defines a committee as "a body of persons appointed or elected to take action upon some matter of business". This definition certainly needs no elaboration; however, I think it is helpful to recognize that we have advisory as well as executive committees. Also, we should be aware of the fact that committees can be both formal and informal. Often we find ourselves either at the head of, or as a member of, a group of people called together for a specific purpose even though we may not think of such a gathering as a committee.

One basic factor which helps improve the results of committee meetings is advance planning. Proper preparation for meetings is often neglected or given cursory attention. Important details, usually involving background information or substantiating data, are then not available when the committee needs them. Frequently people are called together for a meeting on the assumption that somehow problems will be solved automatically once the meeting starts. We know from bitter experience that this just isn't so. Sometimes problems are magnified as a result of poor group leadership. The executive who doesn't take the necessary time to thoroughly plan an important meeting is just asking for trouble and usually ends up blaming the committee for his own shortcomings. Every important meeting should have a clearly defined purpose or agenda which is understood in advance by all concerned. The participants should have enough information about the subject matter so that they can give it advance consideration, or at least know what will be expected of them at the meeting and "come prepared".

The tone or atmosphere of a meeting usually reflects, to a great extent, the personality of the leader and how he goes about getting things done with people. In this connection, groups function best when the individual members know what the leader expects of them. Are they present to voice their individual points of view so that the leader can make up his own mind? Are they there to be "sold" or "told" what some one else has already decided? Or, are they expected to enter into a give-and-take discussion for the purpose of arriving at the best possible group conclusion? It is, of course, the latter type of orientation which produces the best results, particularly in situations where the participants will later be expected to carry out the decisions which are eventually made by the executive leader who is accountable.

Just as the chairman or leader has responsibilities to the committee members, so the individual participants have definite responsibilities to both the leader and the other participants. Coming to meetings unprepared is the most common offense. Failure to listen with open mind is probably of equal importance. A highly vocal person whom I know was once asked, "What do you do in meetings when you are not talking?" He replied, "I am making up my mind what I am going to say next!"

Such comments as this would lead us to believe that maybe the trouble with many committees isn't the mechanism itself, but how we use it.

***H. E. Lunken***
*S.A.M National President*

# We Should Extend Incentives

by Phil Carroll

1st Vice President, S.A.M., and
Professional Engineer
Maplewood, N. J.

MANY of you know that I have worked with incentives continuously since World War I. Thus, I think I can give you most of the reasons why you should keep away from them.

Perhaps the reason most commonly heard is, "Eighty per cent of our grievances result from our incentive plan." Those who say that are tempted to relieve the stresses by throwing out their incentive plans. Many managers have done so. Let me ask you, "Can you solve a problem by running away from it?"

Of course, we prefer to be comfortable. Like the manager who said to me, "Why should I? Remember, I'm due to retire in two years." Or another who said, "Phil, that sounds to me like a helluva lot of hard work." My reply was a question, "Do you know any easy way to make half a million dollars?"

## More Incentives

Regardless of all the reasons why not, I believe in using incentive plans. Maybe I fit the definition given years ago by George M. Cohan. He said, "A genuine optimist is one who believes in himself despite the facts."

There must be others. Consulting engineers had their biggest year in 1956. Their firms have expanded 650 per cent since their foundings according to a recent survey.[1] In this same vein, I saw seven references to the results of incentive plans in the January 1957 magazines I read. And, it seems to me, I get more inquiries for "good timestudy men" than ever before.

You can draw your own conclusions as to whether or not incentives are on their way out. For example, you may agree with the author who writes, "But under automation, with continuous flow, a worker's worth can no longer be evaluated in production units. Hence output incentive plans, with their involved measurement techniques, may vanish."[2]

[1] *Consulting Engineer, p. 86, January 1957, Consulting Engineering Publishing Company, St. Joseph, Michigan.*

[2] *Bell, Daniel, "Living With Automation", Management Review, p. 83, January 1957.*

Maybe they will. But not for the reason given. In the first place, most of the companies we know something about could not utilize automation if they wanted to. Their parts are not uniform enough to run continuously. They would have backyards full of scrap before they could turn off their automatic machines.

In the second place, most companies do not have large enough quantities. We must remember that roughly 86 per cent of our plants have less than 100 people in them.

In the third place, we still have to get some man interested enough to push the button. And to grind and adjust the tools. And to stop the machine when it begins to turn out scrap. We are a long way from the condition depicted in a recent cartoon. The boss man was arriving Monday morning in his limousine at a factory that had smoke belching from the chimneys. His exclamation was, "My gosh, I forgot to turn off the factory over the week-end."

Those are details. Where that author misses the point entirely, in my opinion, is that incentives apply to people—not machines. Maybe he supposes, like many Industrial Engineers appear to, that incentive plans are suitable only for repetitive direct labor operations. What about the indirect?

## People Spend Money

Automation is not going to eliminate our overhead. As a matter of fact, if we ever get to automation, all of us will be overhead. And our overhead rates will be at infinity. We will still have

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salesmen, managers, engineers, accountants, maintenance men, tool makers, and, I hope, timestudy men. Should not we provide incentives for them?

Let's not overlook the basic fact that incentives apply to people. They apply regardless of the type of work done.

At least three are present in most companies. One is negative and two are positive. The three I have in mind are

1. fear—worry lest you catch hell or lose your job
2. pride — desire to accomplish results or to make a name for yourself, attain status
3. hope — urge to get ahead, make more money or to be promoted.

These incentives exist and will continue despite what you and I may think.

### Directed Incentive

Thus, the only question about incentive we are concerned with here is whether or not it shall be organized. To answer this question, I'd like to give my reasons why I think we need directed incentives. These I plan to group in three types.

Management decisions
Family comforts
Individual development

Of these, management decisions come first. What products shall we make? What business shall we go after? What prices shall we quote? What deliveries can we promise? These are a few of the fundamental decisions that management must make.

This job of trying to decide today what will happen tomorrow is the manager's most difficult task. Does his organization go along to prove that he was right?

### No Sale, No Job

If he is a smart manager, he has set up sales quotas. He must be fully aware of the fundamental so clearly stated as, "No Sale, No Job"— the title of Alexander Heron's recent book. Unless he manages to sell his products, he need not be concerned about incentives either pro or con.

To get customers to buy his output, they were persuaded by someone we call a salesman. What incentive caused him to bestir himself to go out and dig up customers? Maybe the customers came to his plant through jobbers or distributors. What incentives did they have to push his goods?

### What Is Cost?

Obviously sales effort is not the only factor. Price is important too. Customers buy when they think our price is right. Under our free choice system, they may buy your products or those of your competitors. They may purchase substitutes. They may decide to buy none of these. Thus, to my way of thinking, the customer sets the price.

What they pay us for our products must be more than our costs. Otherwise how are we to survive and prosper? That brings us to the question, "What is cost"? To most of us, cost means Material, Labor and Overhead.

For our purposes, I'd like to have us analyze costs differently. Let's think of costs in only two parts. One is materials — things we, as customers, buy from other producers. The other is conversion —work we do in applying the skills of our organizations. Instead of the term conversion, you may prefer to think of "value added." These terms are not interchangeable. But that is not important here.

The point is that what we do in any plant is to convert materials — change form, shape, size, color. That means work —time and skill of people who make up an organization. Thus, people determine what the controllable parts of our costs are to be.

The time people take to do work depends upon two major factors—method and diligence. Maybe you can improve your methods. Most companies can. Regardless, you still have the twofold problem of

1. Getting people to use the best method available. You know about the farmer who was "not farming half as good as he knows how now."
2. Getting people to work diligently. You know also about the fellow who wasn't afraid of work. He said he could lie down right beside it and go to sleep.

How can managers decide what costs and deliveries are likely to be without some kind of work standards with incentives to meet them?

### Work Standards

Either management sets standards of performance or the people set their own. The difference is important. The excess cost when people set their own standards is about 65 per cent. You get that excess when you divide the most often stated figure of 60 per cent efficiency on "day work" into the cost you would expect at standard. (100/60 — 1.0) In amount, that is vastly more money than most companies make as profit.

This 60 per cent efficiency that some experts mention refers to the performance of so-called direct people. Undoubtedly it is much less for the indirect. Here, we are talking about all the people. The efforts of all the people go to make up the bulk of what I call conversion cost.

Therefore, it seems obvious that we should measure the work of the indirect and overhead people. I suggest three reasons. The first is that we have done so little to measure and control overhead costs. As a result, the cost improvements to be realized are tremendous. All of the different kinds of improvements we have made in our direct operations are open to us by studying the indirect. Duplication of effort occurs in many places. We continue to put one system on top of another because of our mistaken notion that systems control costs.

Too, we have all kinds of wasted effort. Lots of work is done over again because there are people to do it. Wasted work goes on because we do not have "blue prints" or specifications for our indirect operations like we set up for manufacturing. Lack of what I call "engineering" is a major cause of excess overhead cost.

Third, and to me the most important, is the need for analyzing how overhead is spent in relation to our several mixed products. Until we make more exact analyses, we cannot establish product costs that remotely resemble the correct ones. Yet, managers must go on making decisions with misleading costs until we can supply better ones.

### Budgets Are Not Measures

Expense budgets cannot help us to attain any of these three ends. Budgets, commonly speaking, are only sums of money set up from past performances as stop gaps. None I have seen specify what work should be done for the money allotted. Nor do they limit the number of times the work is to be repeated.

Besides, budgets are set for a function.

Production control might be an example. The money allotted is for carrying on the function of production control. But the work required differs widely from one product to another. If any relation of production control to the mixture was considered, it was assumed that the proportions of the past would continue. It rarely does. Customers change their points of view with the weather. Consequently, the budget is too loose or too tight according to the demands for production control brought on by each new product mix.

With these three basic errors, we have no way of knowing that performance is improved when budgets are met. Only last week I saw where a supervisor met his budget for three consecutive weeks and ran over it on the fourth. He had met his budget by putting aside some of the work. When the pile got too high, he was forced to reduce it. His only incentive were fear and pride.

### Profits Lost

Expense budgets are steps in the right direction. As Peter Drucker says, "Objectives are needed in every area where performance and results directly and vitally affect the survival and prosperity of the business."[3]

All of us will agree with his specification. Yet, except for the urge to make a profit, few companies that I know of have set objectives for every function in their organizations.

Our basic problem is much deeper. It is well stated by G. Charter Harrison. He says, "The outstanding defect of the conventional profit and loss statement is that it . . . report profits *made* but it does not show profits lost. . . ."[4]

I can add to that from my own experiences. In the few instances where I have analyzed a company's profits, I have found that roughly 20 per cent of the volume was turned out at a loss. This meant something like another 20 per cent of profitable products had to be sold to offset the loss. That tells us whatever profits were made came from about 60 per cent of the volume. All those organizations got from the 40 per cent was the exercise of working on it.

This condition resulted from wrong costs. They were no farther wrong, however, than most company's now are. Does that fact make it clear to you why I think the manager's job of making decisions is so difficult? And Operations Research won't help him very much. He can't get any better answers from the slot machine than he can feed into it.

The solution lies in the correct measurement of saleable output. That and only that is direct labor. All the rest is indirect. We must find out first the equivalent of good saleable pieces because we figure conversion costs as labor plus overhead.

We haven't a chance of getting correct costs until we get a common denominator that measures saleable output. We cannot tell how to correctly direct the efforts of our organizations. Therefore, we should measure work to set the foundation for determining correct costs. Only then can a manager tell where the money is made or lost.

### Wage Costs

Now let's consider the second group of reasons why I think we need directed incentives. These I called "family comforts." They have to do with our American standard of living. You will note also that they bear directly on the cost of conversion, hence on profits.

People want more money. They are getting more. Some have joined unions expecting to get still higher wages. Along with the higher wages go all of the fringe benefits you know about. Perhaps there are more we have not yet thought of.

For example, look at the want ad columns of any newspaper. There you find the greatest array of advertising for engineers that most of us have ever seen. This is a picture of the customer willing to pay a higher price in order to take the engineer away from some other employer. If the prices paid to get engineers are too high, either the profit disappears or the price of the product goes up. Then the customers may refuse to buy. The only exception I can think of is that you and I, the taxpayers, may continue to buy the output through our Secretary of Defense without immediately knowing we are paying higher prices.

About this attempt to improve our standard of living Alexander Heron says, "The big deal on wages is not the one between the worker and the employer, but the one between the worker and the consumer. The consumer is almost the final judge as to the fairness of the day's pay and the day's work. Both are reflected in the price of the product."[5] And later on, "What can be done to injure sales by raising the *cost* of a day's work too high can be done just as definitely and just as promptly by making the *value* of a day's work too low."[6]

Let me restate his comment to fit our topic. "What can be done to injure sales by raising the *wage rate* of a day's work too high can be done just as definitely and just as promptly by making the *productivity* of a day's work too low."

Where is this more money to come from? We know there is no gold mine in the back yard to take it from. Thus, as I see it, it must come from two sources — profits and productivity. Much has been taken out of profits already. You see how the per cent of profit has rapidly declined. This may discourage the investor who has money to spare. Occasionally, you see that an attempt to sell stocks and bonds has not been very successful. How then will we get the money to expand and repair our plants?

### Increased Productivity

That brings us to the real source of our higher standard of living—namely productivity. In this, the most oft repeated definition is "a fair day's work

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[3] *Drucker, Peter, "The Practice of Management", p. 63, Harper & Brothers, New York, 1954.*

[4] *Harrison, G. Charter, "The Dead Hand of John Gough", p. 8, Madison, Wisconsin, 1941.*

[5, 6] *Heron, Alexander, "No Sale, No Job", p. 83-85, Harper & Brothers, New York, 1954.*

for a fair day's pay." The only exceptions I can remember are two. One is the wish made by one manager who would like to get "a fair day's work for a fair week's pay." The other was the employer in Houston who posted the oft repeated memo concluding with the plea that, ". . . each employee endeavor to find some time that can be set aside and known as the 'work break'."[7]

To determine what is a fair day's work, I would use timestudy. It is just as suitable for measuring indirect as direct labor. Keep in mind that we are talking about people's costs. And note what Fortune says about our productivity. "Output per employee for all 17 million persons in manufacturing has not increased in the past year. True, the output of the 13 million production workers in factories increased by about the usual 3 per cent. But the number of non-production workers, meanwhile, increased by about 250,000 — enough to cancel this improvement."[8]

By studying the time that people take to do their work, we uncover a lot of wasted effort. In addition, we find out those things that interfere with production. We get down to the foundation of good management. Two pioneers gave us the keys. Frank Gilbreth told us, "Scientific Management hangs upon the science of timestudy."[9] And Henry L. Gantt pointed out, "In connection with the man's record, it is the most complete analysis of the workings of a plant, and the one that will help us most quickly to bring into their proper channels things that have gone haphazard."[10]

### Management Errors

If we put these two ideas together, we have a sorting device. With it we can sort out the measure of saleable output. To me this is a vital point because today our plants turn out a mix of products. Therefore, as I said earlier we need an equivalent of good saleable pieces as a common denominator before we can hope to get correct costs. For this purpose, Standard time is the best measure we have found to date.

In this sorting, we uncover also what I call "management errors." These I divide into three groups — failure to plan, failure to specify, and failure to follow up.

Failure to plan takes in most of the time leaks we classify as "waiting." Beyond the obvious are all of the bits of waiting time that result from unbalanced work loads, paced operations, and process waiting time.

Failure to specify includes the multitude of indirect elements such as excess stock, poor tooling, and fitting at assembly that destroys interchangeability. There is a much higher percentage of this kind of wasted work in maintenance, tool room, pattern shop, office and engineering because either our "blue prints" are more incomplete or they don't exist at all.

Failure to follow up is the label I apply to that failing most of us have. We issue an order or tell somebody to do something. Most of us are pretty good at starting things. But how many carry out their plans or ideas to successful conclusions. About the only follow up I see that appears to work all the time is the function we call inspection. All the rest seem to be now or then. Perhaps this is the cause of our many systems.

### Profit Leaks

These "management errors" are buried in all unmeasured operations. They should be separated so we know how much they cost. They represent profit leaks. To emphasize this point, let's think of the average profit as being about 5.7 per cent. That means our profits average $5.70 per $100.00 worth of goods sold. Thus, you can see that to plug a $5.70 cost leak any place in your organization has the same constructive result on your P & L statement as to sell $100.00 worth of your products to your customers at 5.7 per cent profit.

Remember, too, that "management errors" are wasted time and effort. Therefore, they are indirect labor. As such they cannot earn overhead. This is an important detail. Until these indirect expenses are separated from the so-called direct labor, our overhead costs are misapplied. We make two kinds of cost mistakes. We overcharge one product and undercharge another. That is a direct result of our custom of spreading overhead with a shovel.

Correct costs are a by-product. But a very important one. They help to direct management decisions toward more profitable operations. As a result, people have steadier and better incomes.

The main purpose is to sort out these losses in productivity. My experience indicates that actual waiting time losses run about 10 per cent and extra work time about 20 per cent. Here then are sources of major improvement in productivity.

Since increased productivity is our only way to improve our standard of living, we need to uncover these time losses. To sort out these leaks so you can see them, you need correct work standards with incentives. These should be based on normal or standard work conditions.

Only then can you have signals that tell you when "management errors" occur. This, in my opinion, offers the most economical and fruitful way to increase productivity. This is the way I suggest we can increase family comforts without adding to inflation.

### Develop People

That brings us to the third group of reasons why we need directed incentives. These relate to the development of people. We develop people to manage our industries or they fold up. We develop people to turn out our products or we have nothing to sell. Consequently, we need to set goals and measure performances against them. How else can we tell whether or not people are developing?

Rarely do you see any mention of measurement in all this talk about executive development. Can these men develop? Do they? How do we know?

Maybe you agree with Imogene Fey. She says, "Of course, America has boundless faith in her young people. She proves it by the size of the public debt she expects them to pay off."[11] I'm sure that you young men agree with James Lincoln. He comments, "Since the average span of life is increasing rapidly, funerals do not occur as often as they should for the best progress of most companies."[12]

Was it security from the cradle to the grave that made America great? Certainly not. It was incentive more powerful than most we have today. It was the chance everyone had to make the most of his skills and abilities.

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[7] *Reader's Digest, November* 1954.

[8] *Business Round Up Productivity Rise Ahead, Fortune, p.* 38, *December* 1956.

[9] *Gilbreth, Frank B., "Primer of Scientific Management", p.* 100, *D. Van Nostrand Company, New York* 1912.

[10] *Gantt, Henry L., "Work, Wages, and Profit", p.* 288, *McGraw-Hill Book Company, Incorporated, New York* 1913.

[11] *Fey, Imogene, Saturday Evening Post, April* 14, 1956.

[12] *Lincoln, James F., "Incentive Management", p.* 59, *The Lincoln Electric Company, Cleveland* 17, *Ohio* 1951.

### Individual Growth

We still have those skills and abilities. And according to Lecomte du Nouy, the desire to attain a superior level is "... the trait which above all others links man most clearly to the divine task of evolution."[13] And James Lincoln puts it this way. "It is obvious that the Creator in giving to man such abilities expected them to be used."[14]

Besides, we now have much more education to help us utilize our skills. But how do we know we are making the best use of these vital resources?

Unless we measure applied skill and ability, we have only seniority to go by. That can be more disastrous than you may think. Let me emphasize by recalling the startling statement made by Byron Clark, past president of SAM. He says, "It is estimated that less than 20 per cent of the people who are in industry are in that kind of work for which they are best fitted. This means that 80 per cent go to their daily work wishing they were in a different vocation."[15]

Sure, we talk about proper selection and placement. Perhaps, some day we will get the round pegs in the round jobs. Naturally, that will take the brakes off. But how do we get the engine going at top performance?

Experts tell us that most men have a great deal more ability than they ever use. What a loss that is to industry.

What can we do to bring out these abilities? I say, "Let's use incentives." So do others. For example, Business Week reports, "Perhaps the key to General Motors' entire incentive bonus system is that ... every eligible person's performance and qualifications are thoroughly reviewed ... each reward is individual.... This method of bonus selection cannot be overrated as a force in GM's management development. ..."[16]

Take another. A survey was made to find out how to get the best from salesmen. It shows that 35 per cent of sales meeting programs included discussions of awards and incentives.[17] And a third says, "... the compensation plan should provide for greater earnings to individuals who are successful."[18]

### Tomorrow's Leaders

The facts are that people respond to incentives. Whether it's the more money or the improved performance record matters little. People know they are getting ahead. They are getting individual recognition for their output. They have an unbiased measure of their relative worth.

These responses seem vital to me. They counteract the tendency to conform, to go along with the crowd, to hold to the average. They offset the trend toward mediocrity.

My belief is that we need incentives that induce people to go beyond "keeping their noses clean." We need performances that are better than hanging on until the pensions start. We have to encourage people to stick their necks out to be counted. How else will we get the leaders for tomorrow?

### Extend Incentives

Keep in mind that industry is people —not machinery and buildings. Industry succeeds or fails depending upon the people who make up what we call its organization. What is the difference between success and failure?

My guess is that it is not difference in skill. I believe the skills are about the same. If that is a reasonable assumption, then the difference between success and failure lies in the application. Then what is it that gets people to apply the skills they have? You may say, "Leadership." Isn't that incentive?

No incentive I know of can equal the potential of inspiration. Even so, one expert has said that only 10 per cent of those who succeed do so through inspiration. Then, also, how much of the leader's inspiration can we expect will get the desired actions from the people who are shielded by one or two layers of interposing supervisors?

Make no mistake. There is no system you substitute for good management. But management that is good is a decision-making group of men. Their decisions have to be carried out to be of any value. How do we get the necessary action?

Again I say, "By directed incentives." Many companies direct their manager's interests toward making profits by means of incentives. To make profits, however, these manager's must first get salesmen to bring in the customers. Second, they must get people to control costs and to make deliveries.

To get the customers, many companies direct the interests of their salesmen toward attaining their quotas by using incentives. Also, many companies direct the interests of their supervisors toward controlling costs through the use of incentives.

Note carefully, however, that it is the individual who does the work that makes the sale or makes the cost. Supervisors control the circumstances or environment, if you prefer.

Only the person who does the work can turn it out correctly—or with defects. Is he interested in doing it correctly and efficiently? Does he conserve or waste materials?

With sound incentives, you can gain and sustain his interest in higher productivity of good work. Incentives provide the flywheel that helps make come true more of management's decisions. That's because the individual has a financial interest in the outcome.

Through incentives we gain higher productivity. That is what made our Nation great. Through incentives we gain also higher earnings and lower costs. Incentive is the only management tool that will give us all three of these constructive benefits. To me, these are reasons enough why we should extend incentives.

With incentives, we can get the individual to apply more of his inherent abilities.

And finally, Directed Incentive is the best antidote I know of for the attitude that Winston Churchill pointed out. He said, "We must beware of trying to build a society ... where enterprise gains no reward. ..." ■

**Copyright Acknowledgment**

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[13] *du Nouy, Lecomte, "Human Destiny", Longmans, Green & Company, New York* 1947.

[14] *Lincoln, James F., "Incentive Management", p. 8, Lincoln Electric Company, Cleveland, Ohio* 1951.

[15] *Clark, Myron, H., "Training Engineers to Handle Men", S.P.E.E., Pennsylvania State College,* 1939.

[16] *Business Week, "Plenty of Men for Any Spot", p.* 168, *January* 12, 1957.

[17] *Management Methods, "How Companies Handle Their Sales Meetings", p.* 10, *December* 1956.

[18] *Management Review, "How to Reorganize Without Crisis", p.* 15, *January* 1957.

[19] *Churchill, Winston, p.* 48, *Reader's Digest, October* 1943.

# Case Study Of A Work Simplification Team

by Robert G. Murdick

Administrator, DIG Reactor
Engineering Section
Knolls Atomic Power Laboratory
General Electric Company
Schenectady, N. Y.

THE Knolls Atomic Power Laboratory, like other newer operations of the General Electric Company, has expanded rapidly in recent years. Both functional and organizational changes accompanied this growth. With increased emphasis being placed on engineering and production, it soon became apparent to management that the drafting operation had not been developed proportionately. Some of the indications of this condition were:

1. Engineers and engineering assistants performing considerable drafting work.
2. A large backlog of drafting work.
3. Need for better control and scheduling of drafting work.
4. Need for better communications between drafting and engineering and manufacturing personnel.
5. Need of a good system for evaluating and measuring individual performance.

As a result of this appraisal, management established a Work Simplification Task Force to study the drafting operating and make recommendations for improvement. The Task Force was made up of the Chairman and five key individuals from the drafting, engineering, manufacturing and administrative functions. A consultant from the Engineering Services Division of the G.E. Company was assigned to guide and assist with contacts throughout the Company. In addition, a Senior Draftsman's Committee consisting of four experienced draftsmen made suggestions, called problems to the attention of the Task Force, and reviewed recommendations of the Task Force.

## Job Flow, Control, and Procedures Study

*Organization*

The major problems listed above were assigned to a member of the Task Force. This member became Chairman of the Job Flow, Control, and Simplification Study Team. He was allowed to call upon four of the most competent supervisory and specialist personnel in the Laboratory to form his Team. These men were drawn from the drafting, engineering and manufacturing functions.

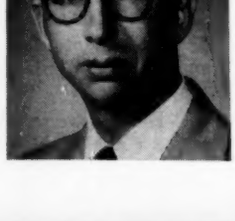
*Objectives*

The purpose of the study was to insure that the drafting organization provided the maximum quality and quantity of service consistent with the most effective use of manpower and facilities. Breaking this broad goal down further, the objectives of the Job Flow, Control, and Procedures Study Team were to review the operation of the KAPL Drafting Unit and to make recommendations, if necessary, on procedures which would: (1) simplify operations, (2) provide adequate control of operations and personnel, and (3) provide for good planning. The recommendations were to be made in sufficient detail so that implementation was clearly defined.

*Operation*

The operation of the Job Flow, Control and Procedures Study Team was typical of those of the other teams formed by the Task Force to study reference information, reproduction, etc. The JFC and P study was divided into four parts:

**ROBERT G. MURDICK has been with General Electric since 1946, upon his discharge from the Armed Forces. He began with GE as an Engineer in Advanced Development Section of the Aeronautics and Ordnance Systems Division (1946-51). From 1951-55 he was Supervisor of Technical Reports and Instruction Books at GE's Knolls Atomic Power Laboratory. From 1955-57 he was Engineer of Reactor Hazards Evaluation, going to his current job of Administrator this past year. Mr. Murdick is a member of the Society for Advancement of Management and a licensed Professional Engineer in New York State.**



## EXHIBIT A

## DRAFTING JOB FLOW, CONTROL, AND PROCEDURES

### An Outline of Factors for Investigation

CONTROLS

*Job*

Flow of instructions
Flow of work
Control forms
Control records
Total number of jobs
Backlog in man weeks for each Project and in total
When job will be finished
Is job on schedule
Is required date of job known

*Personnel*

Number of people
Classification of each individual
Organization
Job each individual is working on today
Length of time individual has been working on the job
When individual will finish current job
Next job for each individual prior to completion of current job
Assignment of draftsmen of proper classification to each job
Performance of each individual
Time vouchers

*Cost*

Drafting techniques and methods
Reproduction techniques and methods
Utilization of materials and supplies
Utilization of manpower
Arrangement of space and type of working conditions
Availability of reference data
Clerical procedures
Techniques of record keeping
Absenteeism
Turnover
Overtime
Subcontracting
Participation in cost reduction programs

HISTORICAL RECORDS

*Job*

Total number of jobs for each unit of time
Drafting load in man years for each unit of time
Number of jobs completed on schedule, late, ahead of schedule for each unit of time as well as in total
Man hours required to produce each job and average man hours per job
Man hours per square foot of drawings
Backlog in man weeks for each unit of time
Record of reproduction in types and area of paper per unit time
Average number of copies made per drawing

*Personnel*

Regular personnel data on each individual (age, experience, classification, over-all performance, service, etc.)
Each draftsman's performance on each job
Number of people of each classification for each unit of time
Average backlog per man per unit of time
Overtime records
Absenteeism records
Turnover records
Number of draftsmen per engineer at beginning of each month

*Cost*

Labor and overhead costs for each unit of time
Rate in dollars per man week that jobs are being turned over
Results of cost reduction programs
Costs of principal supplies such as capital equipment, drawing paper, and reproduction paper

PLANNING AND ESTIMATING DATA

All estimates are for two years in advance except where indicated. Charts might be revised quarterly.

Work load in man weeks for each unit of time
Estimated reproduction load per month by number of copies and by square feet
Number of men working on each Project (cumulative chart)
Number of draftsmen available
Backlog for each unit of time
Recruitment (or layoff) required
Personnel development
Labor and overhead costs for each month
Rate in dollars per man week that jobs will be turned over
Costs of principal supplies and capital equipment
Overtime and/or subcontracting in man hours per month
Schedule of known jobs at any time

MEASUREMENT OF PERFORMANCE

Comparison of all predicted data with actual performance
Cost per square foot of drawing
Classification of work vs draftsmen's classification
Effectiveness of cost reduction programs
Morale

CORRECTIVE PROCEDURES

Instructions
Standards
Modification or change in procedures

1. Collecting and correlating data
2. Designing forms, records and reports
3. Establishing procedures
4. Making final recommendations and reports

In order to carry out the first part of the study in an orderly fashion, it was first thought desirable to classify the type of information sought. To this end, a list of factors to be investigated was made made up as shown in Exhibit A.

With this list as a guide, reports covering drafting procedures and forms for a number of other comparable components of the Company were obtained and studied. Next, vendors of business systems and equipment were consulted. These people were most gracious in supplying information on the most modern practices and equipment used for control of work. With this background, the Chairman of the JFC and P Team visited several selected components of the Company to discuss at length with the supervisor of drafting his drafting operation.

Such facts as permitted by time had then been gathered. The Chairman then met with the rest of the study team and presented the information he had gathered. At this meeting, open discussion was held on what controls were desirable at KAPL, what problems needed to be eliminated, and how current forms could be improved or eliminated. Following the meeting, the Chairman roughed out a flow chart and the forms that seemed desirable from the suggestions proposed by the study team. The study team then met on a weekly basis, developing the procedures and forms in a series of successive approximations as follows:

1. Accumulating data
2. Arbitrarily selecting a plan and establishing the detail
3. Integrating the details of the controls, procedures and forms internally and with other Laboratory organizations
4. Reviewing the proposed procedures and forms at a Task Force meeting
5. Modifying and revising the total result
6. Repeating steps 4, 1, and 5 until the optimum result is obtained with the allowable time schedule for the project

The effectiveness of such a study team depends to a great extent upon the atmosphere of the meetings. New ideas must be encouraged, submerged gripes with the old methods must be uncovered, and the members must avoid direct criticism of ideas presented. Criticism is actually expressed indirectly by suggesting an idea that is accepted as better by the group.

An example of an unorthodox idea that developed from the needs stated by the study team members was the *off-size* drafting request form, Exhibit C. By making this form 8 X 10 inches, it could be folded to fit in an 8 X 5 inch visible card index maintained by the drafting supervisor. The bottom half was thus used only for control purposes by the supervisor after the job was once assigned. The draftsman and the originator file the form flat, since they are concerned with the description of the work. It was concluded that no inconvenience would arise from filing these off-size forms in their separate files.

### Final Report and Implementation Of Recommendations

The Chairman of the JFC and P Team presented the conclusions of the team at a regular weekly Task Force meet-

## EXHIBIT B

## SUMMARY — DRAFTING STUDY

Task Force: Job Flow, Control, and Procedures
Chairman: R. G. Murdick
Project Number: 1b and 1c

*Scope and Description*

1. To determine drafting procedures and controls in sufficient detail so that implementation was clearly defined.
2. To design the forms necessary to carry out the recommended drafting procedures and controls.

*Principal Conclusions*

A simpler procedure with greater control of operations is made possible by revising the old procedures in accordance with the flow charts shown in the detailed report. The use of simplified forms discussed in the detailed report are an integral part of the procedures. For didactic reasons, the discussion of forms precedes the discussion of the procedures.

*Recommendations*

The new procedures and forms should be adopted at once. A detailed job analysis of each operation should be made by the Drafting Unit on a continuing basis.

*Estimated Annual Savings*

Intangible.

*Cost of Carrying Out Recommendations*

$100.

ing. The work was approved subject to minor modifications. The Chairman of the JFC and P Team then prepared a detailed report and the summary report shown in Exhibit B.

The detailed report contained complete flow charts for the new procedures for processing drawings, each new form with a completed example, and a statistical comparison of the old and new methods. Totals are given below to illustrate the results broken down by individuals, forms or procedures in the actual report.

**Table 1**

Comparison of Forms for Old and New Procedures

| | No. of Forms | | No. of Copies Including Original | |
|---|---|---|---|---|
| | New | Old | New | Old |
| Total ..... | 13 | 12 | 28 | 32 |

**Table 2**

Generation of Drawings

| | Operations | Inspections | Filings |
|---|---|---|---|
| New Procedure ..... | 25 | 9 | 15 |
| Old Procedure ..... | 29 | 1 | 8 |

Several significant facts may be noted from these tables. First there has been a slight decrease in the pieces of paper and number of operations relating to all phases of drawing processing and job and personnel control. Secondly, the number of inspections has increased significantly, which correlated in fact with the improved control of the drafting operation.

THE conclusions as stated in the detailed report were: "Comparisons of the old procedure and new procedure substantiate the conclusions that better job and personnel control have been obtained although the number of operations and copies of forms have been reduced.

The new forms and procedures which were recommended and are now in effect should be modified from time to time as necessary to obtain the most efficient operation. The objectives of obtaining maximum service at minimum cost should continue to be the guiding factor."

The implementation of the recommendations was, of course, the responsibility of the drafting supervisors. However, since the responsible drafting people had participated in the work of the study teams, implementation progressed closely behind the work of the study teams.

After an eight-month program requiring the time many key people, both individual contributors and executives, the question may well be asked "Was it all worth while?" The result of some of the study teams could be easily and directly measured in dollars saved. In the case of the JFC and P study, (Exhibit A) there was no overwhelming reduction of labor or forms so that the gains were more intangible. Better control, better planning, and better service soon were evident as the implementation of the program progressed. Other intangible benefits were the improved working relationships between Drafting and the organizations serviced, the better working conditions, and the improved morale of the drafting organization. The fact that management was so interested in making the Laboratory drafting unit one of the best in the Company could not help but improve the morale of those concerned. Further, the study of improvements is not ended by the conclusion of the Task Force. A standards specialist is now working continuously with the drafting supervisors to improve methods and standards.

In order to conduct a successful work simplification program of this scope, it was evident that the chairman must spend considerable time on the job. The chairman of the study teams worked on a part-time basis, with the result that it was difficult for them to get away from their operational duties at some needed times or for enough time to do the best job within a scheduled period. One other problem that needed to be overcome was the tendency of some individuals to evaluate any new idea from a viewpoint based on some remote past unsuccessful experience. The techniques of Alec Osborne's brainstorming or group ideation would be of great value if used by such study teams. ■

KAP-1004 (12-54) Revised

KNOLLS ATOMIC POWER LABORATORY
GENERAL ELECTRIC COMPANY

Office No.

DRAFTING REQUEST

New Request ☐ Addition ☐ Change ☐ Other ☐

Description:

| | | | |
|---|---|---|---|
| Title | | Project | |
| S.O. | Date of Request | Required Date | |
| Eng. Approval | Requestor | Phone | Gov't App. Req (Yes-No) |

| Date | % Comp. | Comments |
|---|---|---|
| | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Completed | | Draftsman | | | | Est. Hours | Act. Hours |
| Office No. | Job Title | | Rec. | From. | Start | Balance Manweeks Required | |
| | | | | | | 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 | |

# Experience Isn't Enough

by William Oncken Jr.,

Director of Management Development
New York Central Railroad
New York City

THE planned development of management, by management, for management purposes, is what has become generally called "management development." It is distinct from "employee development," which is the development of *employees*, by management, for management purposes. In the latter we are primarily concerned with the development of job skills, whereas in the former we are concerned with the development of management talent.

The developmental processes involved are entirely different. In a very real sense, of course, every manager considers himself to be a fellow employee with non-managerial personnel; but since he is responsible for making decisions affecting the use of the company's resources, the problem of developing managers contains unique elements not found in the development of non-managerial personnel.

It is clear, then, that the "management" of a railroad would properly include, first, all those who exercise line supervision over the efforts of others; second, all those who exercise staff supervision over the efforts of others (that is, those who advise, assist, coordinate, control or otherwise influence line elements in specific aspects of their work); and third, all those who are primarily responsible for dealing with authorized representatives of suppliers, customers, government, labor, public information media, investors, and of the public. It is in the hands of this threefold group that the fortunes of the company lie.

Now the development of management talent is not something that begins and ends with a "program." We already have in our company many capable and aggressive managers. How were *they* developed? Through the "school of experience." There is no other school that teaches its lessons so well. It is in recognition of this fact that it has been widely nicknamed by its alumni as "the school of hard knocks."

Henry Ford is supposed to have said, "The 'school of experience' is the best school there is, but its graduates are too old to go to work." Ford was at once pointing out its strength and its weakness. It teaches its lessons exceedingly well but it takes too long. Its graduates, many of whom are close to retirement, often say, "If I had only known twenty years ago what I know now, my past twenty years would have been spent differently." Because the "school of experience" rarely teaches its lessons on time, its curriculum is long and slow.

But the "school of experience" has other defects as well. It teaches wrong lessons as well as right ones. It is not uncommon for two men to draw diametrically opposite conclusions from identical experiences. They cannot both be right. And since both men may "succeed" in their companies regardless of this fact, each may feel that his conclusions have stood the test of time. So this brings us to its second defect, namely, that the "school of experience" has a very unreliable grading system. The man who consistently learns the right lessons doesn't always get the gold star.

A third defect is that the "school of experience" has a way of teaching us over and over again the lessons we learned quite well the first time. There are men who have been on one job for twenty years; while they may feel that they have had twenty years of experience, they may in reality have had but one year of experience twenty times repeated. This is wasteful.

Still another defect is that some very necessary elements of experience are missing in our backgrounds and may remain missing until it is too late for us to go back and make them up. These "holes" in our experience were not planned that way, they just happened. Either the right opportunities did not come at the right time, or we were not prepared for them when they did appear.

The "school of experience," then, if left to itself, is a slow, unreliable, and costly institution. But who is at fault?

The "faculty," of course! Each manager's boss is the principal member. Each manager, too, teaches himself. That makes two. Third, there are his associates, one or two of whom may give him a helping hand. And fourth, there is the instructor in a training program. The "school of experience" could undoubtedly accomplish twice as much

in half the time if this faculty could get together.

The management development policy and plan adopted by the Central aims to bring about just this very thing. Each manager will, during the spring months of each year, be given an opportunity to learn *on time* at least some of the things he needs to know to make his career more satisfying and rewarding than it would otherwise have been. This is the key step in accelerating the "school of experience" and in improving the validity and reliability of its curriculum.

This information will be developed annually for each of our 4,000-odd management personnel by appraisal committees established for that purpose. Each manager will be appraised by a committee of three: his own boss and any other two persons he may invite to help his boss, provided that they are drawn from the same management level as his boss. There will thus be as many three-man appraisal committees as there are managers to be appraised. The plan will only be as effective, of course, as the judgment exercised by our managers in selecting the two helpers on their respective appraisal committees. Experience so far has shown that we have little to worry about in this respect.

Each committee reviews its man's past record, his performance, personal qualities, strong and weak points, potentialities, promotability and, from these considerations, agrees upon a plan for his development. (The results of all appraisal meetings are strictly confidential, no official record of them being kept.) After a particular man has been appraised, his boss calls him in and discusses with him what went on in the appraisal meeting. In this way the man, in a manner of speaking, joins his own "faculty." He usually finds that the major part of the plan of action developed by his committee is of the do-it-yourself variety. In other words, *self*-development. However, the committee might also have recommended that he plan to attend a Management Course, or take a course in public speaking, or what not. Thus the various members of *his* "faculty" have gotten together for the purpose of making *his* particular "school of experience" more reliable, more purposeful, more efficient, than it otherwise would have been.

But every school must have a principal. This brings us to the final step in the process. When each boss has finished appraising, committee-fashion, all of his immediate managerial subordinates, and has discussed their appraisals with them, he notifies his own superior that he is ready to report on the current status of their development and on the plans he has for their improvement. This final step is called the "management inventory" because it is an inventory of the *state of development* of the management talent in question. This next higher manager, then, becomes in effect the "principal" of the school in which the management personnel two levels below him are "enrolled." He holds their bosses (who are his own immediate subordinates) accountable for the strengthening of the management talent reporting to them. This is what is sometimes known as management development "two deep." As the entire process is repeated year after year, these "principals" up and down the line will be reviewing the progress of each "faculty" involved in the development of each manager. This process, then, gives effect to our definition of management development stated in the second paragraph of this article, namely, that it is the development of management, by management, for management purposes.

While many auxiliary approaches to management development are still in the planning stage, the appraisal process will be the core around which they are introduced and administered. If, as we hope, this process will lead each of our managers to a more timely realization of his highest potentialities for railroad management, the success of our management team as a whole in tackling its major problems over the next few years will be assured. And the time, money, and effort expended on management development will need no other justification. ■

# New S.A.M Chapter Development

**ONE OF THE most effective contributions you can make to the advancement of the management profession is to assist in the establishment of S.A.M chapters in area where they do not now exist.**

**The many local advantages and benefits which are available to S.A.M chapter members are presently denied to thousands of other management people because they do not have chapters in their own communities. Because the real strength of the Society lies in its chapters, we believe that its total influence and accomplishments can be increased in direct proportion to our ability to establish more new chapters.**

**We have found from experience that the most effective way of organizing a new chapter is to work directly with an individual or individuals, in the local community, who is/are familiar with S.A.M's objectives and who will agree to take an active part in the organization process—and this is where we need your help.**

**Please take a few minutes to write down the names of friends, customers or business acquaintances whom we might contact about getting S.A.M chapters started in their respective areas, and send the list to me at National Headquarters at your earliest convenience. Naturally, we include present and former staff members, especially former Chapter Officers who have moved to new locations.**

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# Group Influence On Technological And Organizational Change

by John D. Stanley

Assistant Professor
Business Organization and Finance
The University of Buffalo
Buffalo, N. Y.

TECHNOLOGICAL and organizational changes are essential elements in the continuous operation of any business organization. Technological changes include simplification of manual methods, use of new materials and tools, and the introduction and improvement of machines. Organizational changes involve the horizontal and vertical regrouping of jobs and functions, the changing of their physical location, and their elimination or addition.

Inflexibility caused by informal group resistance to such changes poses a threat to the successful competitive existence of a firm. Conversely, informal organizations can be used by managers to aid in the implementation of such changes.

*Resistance to Change.* The reasons for informal organizational resistance to change will be examined in two general areas: 1) resistance to technological change, and 2) resistance to organizational change.

## Resistance to Technological Change[1]

Group resistance is aggressive behavior which stems from fear and anxiety. The most common causes of insecurity will be examined in the following paragraphs.

*Unemployment.* Fear of unemployment resulting from technological change is perhaps the primary cause of worker insecurity, and, thus, of resistance to such change.[2]

Economic arguments relative to the relationship between labor demand and technological change[3] are apt to be meaningless to a group of workers in a particular plant. They are primarily interested in their own *immediate future.* In evaluating their changes of unemployment, company methods of effecting change in the past are remembered. Fear of unemployment may be heightened in cases where managers have *threatened* to replace workers with labor-saving innovations.[4]

Managers, particularly those at the lowest level, are not immune to fears of technological unemployment. Work force reductions usually necessitate reductions in the number of supervisors.

Skilled workmen who become technologically unemployed may remain out of work longer than unskilled workers because the skilled individual will seek reemployment in his own craft, rather than attempt to acquire retraining or employment at a lower skill level.[5]

[1] *See Bernard J. Stern, "Resistance to the Adoption of Technological Innovation," in National Resources Committee,* Technological Trends and National Policy (*Washington: U. S. Government Printing Office,* 1937), *pp.* 39-66; *and Solomon Barkin, "Human and Social Impact of Technical Changes," Industrial Relations Research Association* Proceedings *of 3rd Annual Meeting, Chicago, December* 28-29, 1950, *pp.* 112-127.

[2] *John W. Riegel,* Management, Labor and Technological Change (*Ann Arbor: The University of Michigan Press,* 1942), *pp.* 24-28.

[3] *See David Weintraub, "Unemployment and Increasing Productivity," in National Resources Committee,* Technological Trends and National Policy (*Washington: U. S. Government Printing Office,* 1937), *Part I, Section V.*

[4] *See Robert K. Merton,* Social Theory and Social Structure (*Glencoe, Ill.: The Free Press,* 1949), *Chapter XIII.*

[5] *Elliott D. Smith and Richmond C. Nyman,* Technology and Labor (*New Haven: Yale University Press for the Institute of Human Relations,* 1939), *pp.* 14-17.

JOHN D. STANLEY's teaching experience began with the 7th Army NCO Academy in Munich, Germany, where he was an officer-instructor from 1951-52. From 1952-53 he was a graduate research assistant at Indiana University. He was Assistant Professor of Management at the University of Arkansas from 1953-55, when he went to Buffalo's university. Prior to his entry into the teaching field, Professor Stanley's experience in business management included three years as an executive at the Princess Hotel, Hamilton, Bermuda and the Palm Beach Biltmore, Palm Beach, Florida, and one summer in industrial production. He is the author of several papers which have been published in *Personnel Journal* and similar publications.

*Loss of Status.* Fear of loss of status is a second factor which may lead to resistance to technological change. Status within an informal group is lost if the group is dissolved by change. Skilled workers fear the loss of status which occurs when technological changes make their skills obsolete.[6]

A status position, whether formal or informal, is a vested interest to its holder. Barnard found that "*... the resistance to loss of status is in general stronger than the desire to achieve higher status.*"[7]

THE gradual elimination of skill hierarchies which has resulted from job simplification has made the worker more conscious of gradations in status based upon factors other than skill.[8] Apart from formal job status, the most powerful factor determining worker status is his position within an informal work group. Thus, the measure of status has in part changed from individual status, based upon occupational skill, to status within a group, based upon group acceptance. Accordingly, a technological change which would separate a worker from his group status would meet resistance not only from the worker himself but from the entire group.

*Increased Strain and Fatigue.* The fear that technological changes will increase job strain and fatigue has formed a point of focus for informal group resistance to such changes.[9] Resistance will occur if the group *believes* that the change will cause increased job strain and fatigue, whether or not it actually does so.

In general, published research shows that informal groups have reacted more to the fear of imminent technological change than to the change itself.

[6] *W. Lloyd Warner and J. O. Low,* The Social System of the Modern Factory (*New Haven: Yale University Press,* 1947), *pp.* 66-89.

[7] *C. I. Barnard, "Functions and Pathology of Status Systems in Formal Organization," in William Foote Whyte,* Industry and Society (*New York: McGraw-Hill Book Co., Inc.,* 1946), *p.* 78.

[8] *See Richard R. Myers, "Myth and Status System in Industry,"* Social Forces, XXVI (*March,* 1948), *pp.* 331-337; *Julie Meyer, "Hierarchy and Stratification of the Shop,"* Social Research, *XIV* (*June,* 1947), *pp.* 168-190; *and Mapheus Smith, "An Empirical Scale of Prestige Status of Occupation,"* American Sociological Review, *VIII* (*April,* 1943), *pp.* 185-192.

[9] *Riegel,* op. cit., *pp.* 31, 32.

## Resistance to Organizational Change[10]

Fear of unemployment and fear of loss of status, which are common causes of resistance to technological change, also cause resistance to organizational change. Many, though not all, technological changes necessitate organizational changes. However, the two aforementioned causes of informal group resistance are common to both types of change whether the organizational change is necessary for, or independent of, the technological change.

*Unemployment.* Fear of unemployment may be associated with a potential organizational change that threatens to eliminate, completely or partially, the functions of an individual or group. Consequently, unlike technological changes, organizational changes may meet with resistance from informal groups at the higher levels of the supervisory hierarchy, as well as from informal groups among the workers.[11]

*Loss of Status.* Fear of loss of status may be associated with the reduction of relative hierarchical position, loss of a function, loss of formal organizational autonomy, horizontal shifting of organizational units, or change of physical location.

The reduction of relative hierarchical position, the loss of a function, and the loss of formal organizational autonomy all involve a reduction of *formal* status. Consequently, managers would *expect* informal resistance to such changes.

In contrast, managers would be less likely to expect informal resistance to changes such as horizontal shifting of organizational units, or change of physical location. These changes in most cases involve no loss of formal status. However, informal organizations recognize status symbols not provided by the formal organization. Therefore, unless managers are familiar with these informal status symbols, they are unable to equate the possibilities of disruptive resistance to change, or the "cost" of preventing such resistance, with the benefits to be obtained by the change.

In adjusting to change, groups have been less apprehensive when their participation has been elicited, when understandable reasons for the change have been communicated to them,[12] and when the speed of the change has been geared to the magnitude of the necessary group adjustment.

[10] *See F. J. Roethlisberger and William J. Dickson,* Management and the Worker (*Cambridge: Harvard University Press,* 1949), *p.* 580; *and E. Wight Bakke,* Bonds of Organization (*New York: Harper and Brothers,* 1950), *pp.* 194-195.

[11] *See Burleigh B. Gardner and David G. Moore,* Human Relations in Industry (*Chicago: Richard D. Irwin, Inc.,* 1950), *pp.* 332-334.

## Possible Aid to Acceptance of Change

Judging from the available published research, it appears that investigators have been more interested in resistance to change than in the possibility of informal organizational aid to the acceptance of change. However, it has been suggested that there is less likelihood of conflict between the formal and informal organizations than of "effective integration" of the two.[13] If the latter were the case, the informal organization could be expected to facilitate the acceptance of change. In fact, if integration is to be furthered by informal action on the part of those who sense potential conflict between the formal and informal organizations,[14] the facilitation of change is certainly a major area in which such action might take place.

However, it seems that the reconciliation of differences would be more likely to occur at the higher levels of the organizational hierarchy than at the operative level. There are at least two possible reasons for this. First, managerial personnel are likely to identify themselves more closely with the firm. Second, since managers initiate changes, they are more likely to comprehend the need for them and to recognize potential informal resistance; thus, they have both greater incentive and greater ability to intervene so as to obtain informal acceptance of, or support for, the changes.

Among the operative employees, there is an excellent possibility of cooperation with the formal organization if a proposed change holds no threat to an informal group, or, conversely, if it appears likely to benefit it. However, even when faced with a threat to their security and a managerial refusal, for competitive reasons, to divulge the specific aims of a change, workers have been known to accept a change. Such acceptance has occurred because of the workers' respect for the managers and the belief that the managers were protecting the firm's competitive position, and

[12] *Lester Coch and John R. P. French, Jr. "Overcoming Resistance to Change,"* Human Relations, *I* (*August,* 1948), *pp.* 512-532.

[13] *See Bakke,* op. cit., *p.* 194.

[14] Loc. cit.

thus, in part, the employees' interests.[15]

Informal groups of workers have aided materially, both by making suggestions for change in their own right, and by suggesting further modifications and improvements of managerially initiated changes. Further, in the realm of training, the individual worker's adjustment to change has been facilitated by informal groups' tutoring their own members.[16]

The pressure of the group has been used to effect cooperation by individual isolates with the desires of the formal organization. This has often been done without any specific request by the formal organization for such informal group pressure.[17]

In general, informal organizational aid to acceptance of change stems from a recognized integration of the goals of the informal organization with the goals of the firm.

### Recommended Managerial Action

On the basis of analysis of available studies, the following recommendations can be made.

In decision-making relative to formally initiated change, the manager should recognize that it is he who initiates the change, but it is the formal plus informal organization which actually makes the change. Accordingly, in addition to long run effects for the firm, possible short run social and economic effects upon personnel should be anticipated. In anticipating economic and social costs to individuals and groups, possible causes of fear and anxiety should be taken into consideration in order that they may be minimized so as to reduce the probability of informal group resistance.

Insofar as is consistent with requisite competitive secrecy, information concerning future changes should be communicated to the personnel affected. Their cooperative participation in the change will be enhanced if managers have taken care to assure that the necessity for each change is clearly understood.

In each case of proposed change, the personnel affected would be given all *possible* reassurance that they will be retained in the work force with no loss of formal status. Policies to implement this reassurance should be formulated so as to affect all levels within the firm.

In unionized plants, formal grievance procedures will in most cases settle disputes arising from changes affecting operative employees. However, equal care should be exercised by managers in dealing with grievances from informal organizations, whether at the operative level or within the managerial hierarchy.

The successful competitive existence of the firm may be substantially furthered by properly preparing the firm and its informal organizations for the disruption of their equilibria resulting from necessary changes. ■

[15] *Riegel*, op. cit., *p.* 87.

[16] Ibid., *pp.* 88-93.

[17] *William J. Goode and Irving Fowler, "Technology, Collaboration and Morale," in Robert Dubin,* Human Relations in Administration (*New York: Prentice-Hall, Inc.*, 1951), *p.* 334.


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# A Job Review Plan For A Research And Development Business

by Simon J. Rasch
and
William N. Mendell

Flight Propulsion Laboratory Dept.
General Electric Company
Cincinnati, Ohio

**Outmoded job descriptions create personnel and pay administration problems, particularly in a constantly changing research and development organization. A job survey program was developed and conducted to systematically determine inaccurate job descriptions and initiate corrective action. The program thereby promotes sound job evaluation and pay administration based on actual responsibilities.**

CHANGE is a by-word in the Flight Propulsion Laboratory Department of the General Electric Company. We are engaged in the development of all types of flight propulsion systems. We employ a large number of both professional and skilled personnel to perform our highly technical work. The department's functions are varied and complex and the work changes frequently in response to new concepts, economic forces and technological requirements. These shifts of work result in changes in work assignments of both organizations and individuals, sometimes creating personnel administration problems. Further, these changes may create doubt as to the actual job responsibilities or result in unrealistic performance appraisals. Ultimately, changes in individual job responsibilities may affect the worth of the job.

These factors make more difficult and demanding our task of conducting a flexible and forward-looking Salary and Wage Administration program. It is important, from an overall personal and pay administration viewpoint, to maintain accurate job descriptions — especially in a constantly changing research and development organization. We consider accurate job descriptions a vital part of our job evaluation program. We rely on them for up-to-date job evaluation of our highly technical jobs and for employee-supervisory understanding. We have learned that sound job evaluation reduces pay administration problems and enables the department to attract and retain valuable personnel. Against this background we conceived and planned our job review program two years ago. Our specific objective was to make certain that job descriptions consistently described actual work being performed by our personnel. We determined that a timely review was needed of all the job descriptions to detect inaccuracies and insure corrective action.

Our approach was new and direct, to meet the needs of a highly technical organization. We developed and conducted an on-the-job review of all jobs to get existing descriptions in line with actual job responsibilities. We surveyed hourly, non-exempt salaried and exempt positions.

Here is what we did:

1. After careful advance planning and scheduling, we arranged systematic reviews of specific jobs to survey a quota of job descriptions in each organizational component.
2. We first reviewed areas where changed work functions were known or suspected, to meet possibly greater needs. We made allowance in the survey schedule for special reviews requested by supervisors to meet their urgent needs.
3. As a preliminary to each review we individually informed supervisors and employees of the purpose and benefits of the job survey.

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**WILLIAM N. MENDELL has been Manager of Compensation and Organization in the GE Flight Propulsion Laboratory Department since 1953. Prior to that time he was Assistant Personnel Officer of the Veteran Administration Hospital in Chillicothe, Ohio, Training Facilities Officer for the VA in Portsmouth, Ohio, and Supervisor of Labor Market Analysis for USES, Ohio State Headquarters, in Columbus. Mr. Mendell is a member of the S.A.M.**

4. We arranged and conducted personal interviews at the employee's work place to review his responsibilities and gain a better understanding of his work.
5. Later, we compared the interview notes with the employee's job description. We analyzed and noted any significant differences or changes in the job responsibilities.
6. We discussed these important differences with appropriate supervisors to secure their approval of both the survey findings and of the need for a revised description.
7. Finally we sent the summary results of the survey to each supervisor's manager, the Salary Administrator and the Organization Analyst for their information. We maintained a follow-up to see that revised descriptions were received in a reasonable time.

THE unique features of this program were that:

1. The interviewer, an experienced job analyst, was familiar with the job evaluation plans being used. This knowledge enabled him to seek out and identify significant differences in job responsibilities not previously recognized by the supervisor or employee.
2. The survey provided supervisors with a more objective and more complete service than they could perform themselves. It helped them do their job better by assuring them of impartial job information and advice as to the disposition of "problem cases".
3. We successfully conducted a survey of those highly technical jobs which are generally considered to be difficult to describe and evaluate.
4. The surveys assured a thorough review of *all* jobs in each organization to determine the accuracy of the descriptions in reflecting work actually being performed.
5. We actively looked for problem areas arising from outmoded job descriptions, rather than waiting to be notified by supervision.

This is how our Job Survey program solved the problem of maintaining accurate job descriptions in a versatile research orgnaization.

The survey results were:

In 15 months approximately 650 descriptions were reviewed. Forty-two per cent of these required revision; fourteen per cent of the total jobs surveyed were recommended for re-evaluation because of indicated changes in job value; and about half of those jobs recommended for re-evaluation were upgraded, based on revised descriptions showing increased responsibilities. The new descriptions have improved the job understanding of the supervisors and employees concerned.

Our survey results show that there is a need for systematic job description reviews to determine whether significant changes in job responsibilities have occurred.

Our surveys have been valuable to Management because:

1. Supervisors receive objective information regarding changed job responsibilities, enabling them to take corrective action.
2. Supervisors and employees participate in the surveys. In doing so, they gain an improved understanding of their job responsibilities and the relationship of their work to their organization.
3. Supervisors receive a useful service which requires a minimum of their time, does not infringe on employee-supervisor relationships, and helps them do a better supervisory job.
4. The information gathered results in accurate job descriptions which are necessary for sound job evaluation, fair pay administration, and realistic employee performance appraisals.
5. They result in greater awareness by all concerned of the importance of maintaining accurate job descriptions.

This new and direct approach, providing true staff support to Management, has been encouraged by the recognition and acceptance supervisors and employees have shown in response to this service. The job survey program has been valuable in assuring forward-looking and flexible salary administration in our research and development department; it could for others too. ■

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# Communication Practices Of Supervisors In A Mid-Western Corporation

by D. T. Piersol

Coordinator of Management Training Programs
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Endicott, N. Y.

COMPANY policies and regulations are planned and discussed at all levels of management, but the task of transmitting these policies and regulations to the employees is generally given to the first-line supervisor. He is the key link in the process of communication between management and employees. The reason for this is that in many instances the supervisor is the only member of management whom the employees feel they know as an individual. He gives the orders and instructions, handles the grievances and explains company regulations and policies to the group of employees under his supervision. Although the management of our nation's industries must transmit many of their ideas through the use of communication media such as bulletin boards, book racks, filmstrips, company publications, public address systems, etc., they must depend upon the communicative efforts of the supervisor in his day-to-day contact with his workers to complete the communication task.

The vital role of the supervisor on the management team has made him a prime target for research. In an effort to learn more about communication problems and practices at the first-level of management, the case study method of investigations was used to record and analyze the oral communication practices of foremen and assistant foremen in a small mid-western corporation.

This corporation employs approximately one thousand people and manufactures an electro-mechanical component used in radios. The sixteen supervisors who took part in this study held line positions in departments such as subassembly, final assembly, tool and die, plating, etc. The number of employees under their direction varied from fifteen to one-hundred and fifty people. By means of intensive patterned interviews and personal observation, data on the communication practices of these supervisors was collected.

The interviews drew out information on the supervisors' oral communication practices during working hours, at home, and in community activities. The attitude of the supervisor toward his communication tasks, the training he had received in communication, and the lines of communication that he followed in order to do his job were also topics included in the patterned interviews.

The interviews revealed that supervisors appear to have a great deal of difficulty in estimating the time spent in oral communication during the course of an average day, probably because of the many diverse factors that are encountered on any working day. Also, there probably is no such thing as an average day. Every day has its unique problem-situations that must be resolved. Despite this difficulty it seemed important to attempt an analysis both of the quantity of time spent in oral communication, and the purposes of the communication activities.

After considering a number of possible ways to attack the problem, the writer devised a method for observing the moment-to-moment behavior of the supervisors. This method, called the "shadow technique", allowed the observer to record the time spent in each communication act, the type of communication situation, the relationship of the communicator to the communicatee, and the purpose of the communication. Since the observer had known and worked with the supervisors for approximately two years it was felt that they would not be disturbed by his presence in their departments; they ap-

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peared to carry on their duties in a normal manner without seriously distorting the results of the research.

The conclusions from this part of the case study are based on data gathered from observing and recording the oral communication activities of each supervisor for two complete (8 hour) work days. The observations of each supervisor were held at least two weeks apart, in an attempt to obtain a reasonably typical or representative sample of their communication activities.

Definitions necessary in interpreting the conclusions are as follows:

1. *Interview*—A conversation between two people which has a definite business purpose.
2. *Conference*—A meeting composed of three or more people with a business purpose.
3. *Casual or social conversation*—Conversation that does not have a definite business purpose, but may indirectly be an important factor in human relations.

### Conclusions

I. The Supervisors spent approximately 50% (4 hours) of their work day in some form of oral communication, as speakers or listeners.

II. Direction of Supervisors' Communications:
   a. 60%—Down to subordinates and employees.
   b. 30%—Up to superiors.
   c. 10% Horizontal to others on the same level.

III. An analysis of the types of oral communication media showed that supervisors *averaged*:
   a. 35 interviews daily.
   b. 5 conferences daily.
   c. 14 casual or social conversations daily.
   d. 6% of all oral communications by telephone.

(The plant was compact, all on one floor, facilitating personal contacts.)

Note: No formal public speeches were observed during the observation time.

IV. The functional analysis of oral communication behavior was based on the manner in which oral communications were involved in the performance of principal foremanship tasks. These tasks constituted a major part of the supervisor's job.

The percentages of time spent in oral communications, classified by supervisorial tasks, by supervisors are shown below:

**Percentages of Time Spent in Oral Communications**

| | Task Category |
|---|---|
| 33% | Maintaining quality and quantity of production. |
| 20% | Casual or Social Conversation—no direct business purpose. |
| 15% | Training, giving job instruction to workers, getting the right people on the right job. |
| 11% | Planning and scheduling of production, planning and using supplies economically. |
| 8% | Cooperating with other supervisors and departments, reporting conditions needing attention to operating officials. |
| 7% | Adjusting grievances and complaints, keeping workers satisfied, promoting team-work and cooperation. |
| 3% | Accident Prevention and good housekeeping. |
| 3% | Explaining company policy and regulations, maintaining discipline. |
| 100% — | Average of four hours a day in oral communications. |

### Summary

The limitations of conclusions drawn from any case study should be recognized. The above conclusions gained by this research apply to only one group of supervisors. In times of labor disputes or business recessions, the time spent in the task categories of oral communication would probably differ greatly from the above conclusions. During comparatively normal operations (a business period which is not being affected by rapid changes in product line or company growth), the results of the observations indicate how the supervisors in one company spent their communication time.

This article has emphasized the quantity of time spent in the various oral communication activities, but this is only a minute part of the total communication field. A more urgent and serious problem facing management is an understanding of the causes and solutions of communication breakdowns. Despite a great deal of armchair philosophy on the subject, there are no known "pat" answers and panaceas to handle many communication problems. The answers must come from research and actual practice and experience. Case studies are a step in this direction. The analysis of the experiences of many companies can provide a basis for formulating sound conclusions that cover a broad scope of communication problems. Together, theoretical research and practical experience must provide the fundamental communication principles that are vital to the continued improvement of productivity and harmonious labor-management relations. ■

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***By William J. Jaffe. Published by New York University Press, New York. $5.00***

THIS BOOK, as the title indicates, constitutes primarily a treatment in roughly chronological fashion of Alford's professional contribution to the development of scientific management. The author, who is Professor in Management Engineering at Newark College of Engineering, made his study originally as a doctoral dissertation of New York University. The volume was published with the aid and cooperation of Professor Alford's son.

Leon Pratt Alford (1877-1942) may justly be called one of the eminent figures of the first generation of industrial management students in the United States. Author, editor, and in later years university professor, Alford was above all a distinguished industrial engineer. As a leading figure in ASME, he dedicated his professional life and interest to the encouragement of progress in industrial management. Never narrow-minded in his approach to "scientific management," Alford early recognized that progress in industrial management demanded more than technique; that principles and philosophy, taking into consideration the human side of production, must go hand in hand with technical advance.

Professor Jaffe holds the view that Alford's effort to quantify the approach to scientific management through the development with J. E. Hannum of the "kilo man-hour" concept in the late 1920's represented a tremendously significant basic contribution to the measurement of human effort which has been unfortunately neglected by management engineering in recent years. It seems doubtful that current management opinion would concur in this estimate. When we come to evaluate the overall contribution to modern management made by L. P. Alford, it seems likely that those of the present generation think first of *The Cost and Production Handbook* (1934) and *The Production Handbook* (1944) and perhaps secondarily of his biography of H. L. Gantt (1934). As *The Golden Book of Management* records, Alford was the pioneer of management handbooks. "Above all his contribution was interpretative. He passed on to later generations through his handbooks and reports a better understanding of the work of the early pioneers. His wide influence was due to the singular breadth of view, balance of judgment and clarity of expression with which he fulfilled this task . . . Above all, he knew how to stimulate and direct the best efforts of other men."

Some readers may feel dissatisfied with Professor Jaffe's degree of success in trying (Chapters I-IV, especially) to clarify the cross currents of thought and controversy swirling about Alford and other prominent figures during the two decades when the foundations of "scientific management" were being laid. Alford's admiration of Gantt is brought out very clearly; but his evaluation of other important figures of the era is not so evident.

Perhaps it is unfair to evaluate a biography in terms of its omissions when the author has attempted to limit his field of approach. Nevertheless, this reviewer, who never had the privilege of knowing Professor Alford personally, closed the volume with something of a feeling that after reading it he knew very little about L. P. Alford as a personality. Quite evidently here was a man of highest character, of strength of mind, attuned to the intellectual sweep of the time. An intimate friend and admirer of H. L. Gantt, a friend of the Gilbreths, and an acquaintance and critic of Frederick W. Taylor, by virtue of his editorial and committee assignments Alford was both observer of and a part of the stream of development of industrial management principles and practices in the days of the giants. Yet only occasionally does the reader glimpse, and then as through a glass darkly, Alford the human being.

**Ronald B. Shuman**
*Research Professor of Management*
*University of Oklahoma*

## BUDGETING: PROFIT-PLANNING AND CONTROL

***By Glenn A. Welsch. Published by Prentice-Hall, Inc., Englewood Cliffs, N. J. June 1957. $10.60***

BUDGETING does for top-management what the chart of accounts does for the bookkeeping department and engineering drawings do for production. Many companies operating with good charts of accounts and complete sets of engineering drawings get along year after year without even the semblance of a budget. This situation exists because their managements feel that a budget is so complicated that only an expert could prepare, operate, and interpret it.

This earnest book sets about to correct the condition. It is a step-by-step explanation showing how to set up a complete budget. It starts with the organizational requirements, carries through the preparation of the various schedules, and ends with several chapters on the use of the budget as a tool for management control. Every step is illustrated by a sample statement so that the reader sees exactly what the author means. To give continuity and meaning to the examples, most of them relate to a hypothetical *Superior Manufacturing Company*, which is assumed to produce and market two products, X and Y, in three sales districts.

The book was designed as a text. For pedagogical reasons the first and major portion is devoted to detailed descriptions of the forms to be prepared, and the discussion of the principles and applications is deferred to the end. A mature reader would prefer the orientation first and the techniques later. This defect is more than compensated for by the numerous questions and illustrative problems. Thus, the reader seeking practical information, as well as the student trying to pass the course, can test his grasp of the subject as he works his way through the book.

The style is ponderous, and at times the going is rough. Matters are not helped by the fact that the author writes as a reporter rather than as an authority. He leaves it to his readers to select alternative methods and interpretations although on several occasions he clearly would have good reason for taking a stand. His treatment of the formal side of budgeting is exhaustive but he ignores techniques which are helpful in determining content. For example, time series analysis to aid in sales forecasting, and linear programing for setting inventory and production schedules are not mentioned. The few statistical techniques he mentions are treated superficially. These deficiencies can be overlooked or made up by reading elsewhere. The fact remains that this is a solid, thorough coverage of the subject. After reading it, you can go about making a budget with a sense of knowing what you are doing.

**Dr. George D. Wilkinson**
*Geo. D. Wilkinson Company*
*Consultants in Management*
*Princeton, N. J.*

## REVIEWS IN BRIEF

**A.1 THE PATTERN OF MANAGEMENT**
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**Auren Uris 320 pp McGraw-Hill $4.50**
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**A.3 HOW TO SOLVE MANAGEMENT PROBLEMS**
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A.5 **L. P. ALFORD AND THE EVOLUTION OF MODERN INDUSTRIAL MANAGEMENT**
**William J. Jaffe 385 pp N. Y. University $5.00**
A biography and appreciation of the work of one of the "Founding Fathers" of modern scientific management, a distinguished engineer who looked beyond his slide-rule to help develop the managerial principles which have revolutionized production and standards of living around the world.

A.6 **PRINCIPLES OF MANAGEMENT**
**G. R. Terry 744 pp Irwin $7.80**
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# TYPICAL S.A.M CHAPTER ACTIVITIES

## MARCH 1958

| CHAPTER | SUBJECT | SPEAKER | TITLE | PLACE | DATE |
|---|---|---|---|---|---|
| **Alabama** | "Scientific Management" | Homer E. Lunken | Vice President, Lunkenheimer Co., Cincinnati, Ohio | | 11 |
| **Baltimore** | Seminar on Labor-Management Relations | Dean Roy, Conducting | | Johns Hopkins Univ., Charles St., Baltimore | 26 |
| **Binghamton** | "Human Motivation" — Joint meeting with Industrial Council of Chamber of Commerce | Chairman: Jerome Barnum | Jerome Barnum Associates, Director, Directed Energy Institute | Carlton Hotel | 12 |
| **Boston** | "New Challenge in Materials Handling" | Allan Harvey | Operating Partner, Dasol Corp., New York | | 13 |
| **Bridgeport** | "Preventive Arbitration" | Archibald Williams | Vice-President, Conn. Hardware Co. | Algonquin Club | 4 |
| | Plant Visitation (2:00) | | | The Bullard Co. | 6 |
| | Technical Session—"Income Tax" 8:00 | | | University of Bridgeport | 11 |
| **Cent. Pa.** | "New Methods and Approaches in Work Measurement" | Dr. Lucien Brouha | Physiologist, E. I. Du Pont | HUB, University Park | 20 |
| **Charlotte** | "Operations Research" | Dr. Joseph F. McCloskey | Director of Management Services; Partner, Haskins & Sells, New York | Barringer Hotel | 18 |
| **Chicago** | "How To Organize and Control Research and Development" | Charles H. Koenig | Consultant, A. T. Kearney & Co. | Furniture Club of America | 25 |
| | Industrial Engineering Seminar | | | Furniture Club of America | 11 |
| | "The Part Safety Plays in Plant Operations — Financial and Humanitarian" | P. E. Griffith | Staff Supervisor, Chicago Area Plan Safety Results, Illinois Bell Telephone Co. | Toffenetti's Restaurant | 17 |
| | Case History of Computer Application | Don Schiller | Caywood-Schiller Associates | Hardings Presidential Grill | 4 |
| | "A Sales Manager Looks at Production Control" | To be Announced | | Furniture Club of America | 20 |
| **Cleveland** | "Putting Company Executives to Work" | C. West Churchman | | Cleveland Engineering Society Building | 10 |
| **Detroit** | "Manufacturing Cost Control" | K. M. Krecke | Plant Manager, Dearborn Engine Plant, Ford Motor Co. | Rackham Educational Memorial | 20 |
| | Panel Discussion on, "Compensation For Idle Time on Machine Controlled Operations" | | | Fort Shelby Hotel | 6 |
| | Plant Tour | | | Pontiac Motor Div. | 27 |
| **Fox Valley** | "Plant Visitation Giddings & Lewis Machine Tool Co., Fond du Lac, Wisconsin | | | | 13 |
| **Greensboro** | Time and Motion Study Conference | | | | 20-21 |
| **Greenville** | To be Announced | | | | 17 |
| **Hartford** | "Management Through Statistics" | Dorian Shainen | Consultant | Bond Hotel | 20 |
| **Hudson Valley** | "Management Views Material Handling" | Warren J. King | Associate Editor, Factory Management and Maintenance Magazine | Hot Shoppe Restaurant | 4 |
| **Indianapolis** | Plant Tour | To be Announced | | Delco-Remy Div., General Motors Corp., Anderson | 12 |
| **Kansas City** | "Labor Looks at the Industrial Engineer" | William Gomberg | Prof. of Industrial Engineering, Washington University | Elks Club | 18 |
| | Seminar—Financing Business Operations | | | | 20 |
| | Seminar—Product Control | | | | 13 |
| **Knoxville** | "The Lincoln Electric Profit-Sharing Plan" | James F. Lincoln | Chairman of the Board, The Lincoln Electric Co., Cleveland, Ohio | Deane Hill Country Club | 11 |
| | Plant Visitation | | | American Enka Corp., Lowlands, Tennessee | 18 |

# TYPICAL S.A.M CHAPTER ACTIVITIES

## MARCH 1958

| CHAPTER | SUBJECT | SPEAKER | TITLE | PLACE | DATE |
|---|---|---|---|---|---|
| **Lancaster** | "Incentives As A Basis For Corporate Profits" | James F. Lincoln | The Lincoln Electric Co., Cleveland, Ohio | Hotel Yorktowne, York, Pa. | 18 |
| **Lehigh Valley** | "Industry's Stake in the Educational Crisis" | Jonathon L. Thiesmeyer | Superintendent, Training Development & Coordination, Western Electric Co., N. Y. | Walp's Restaurant, Allentown, Pa. | 4 |
| **London and District (Ontario, Canada)** | "Job Evaluation" | Paul M. Edwards | Paul Edwards & Assoc., Management Engineers, Pittsburgh, Pa. | Hook's Restaurant | 20 |
| **Milwaukee** | "Communications" | J. T. McCarty | Employee & Community Relations, General Electric Co., New York | | 13 |
| **Montreal** | "Our Experience with the Rucker Plan" | D. Barwick | Vice President, Barwick & Son Ltd., | Ritz-Carlton Hotel | 21 |
| **Nashville** | "Management Must Move Forward" | E. S. Dillard | President, Old Dominion Box Co., Charlotte, North Carolina | Hermitage Hotel | 13 |
| **New Haven** | "Effective Standard Costing" | Stanley Z. Bronner | Assistant Vice President, Bridgeport Brass Company, Bridgeport, Conn. | Hamden, Connecticut, Reilly's Restaurant | 20 |
| **No. Alabama** | "Motivation and Employee Productivity" | Dr. D. J. Moffie | Vice President, Hanes Hosiery Mills Co. | Hotel Russel Erskine | 12 |
| **N. E. Penna.** | "Electronic Application For the Small Business" | William Buchanan | International Business Machines, Wilkes-Barre, Penna. | Hotel Sterling, Wilkes-Barre, Penna. | 3 |
| **Northern N. J.** | "Labor Relations" | S. Barkin | | Lyle's Restaurant, Kearny, N. J. | 13 |
| | "Design of Wage Incentives" —Training Course—4 days | A. A. Lanna II | | Bloomfield College | 3, 10, 17, 24, 31 |
| | Plant Visit—Motor Car Production 1:00 | | | General Motors, Linden, New Jersey | 18 |
| **Philadelphia** | "Two Modern Miracles" Demonstrations & Films for the Ladies | Albert S. Barnes | Supervisor, Customer Information, Bell Telephone Co., Philadelphia | | 4 |
| **Pittsburgh** | Spring Industrial Engineering All-Day Conference "Management Planning" | R. Conrad Cooper | Vice President, Administration Planning, United States Steel Corp. | Gateway Center | 20 |
| **Portland** | Meeting & Plant Visit, 7:30 "Sportswear Manufacturing" | William C. Ludders | | Jantzen Knitting Mills | 12 |
| | "Merchandising & Purchasing Techniques" | Balfour Gibson | Fred Meyer, Inc. | Public Service Bldg. | 26 |
| **Poughkeepsie** | "Management Development" Panel Discussion | | | Nelson House | 11 |
| **Providence** | "The Cost-Conscious Foreman —1958 Variety" | Phil Carroll | Management Consultant, Maple Wood, New Jersey | Providence Engineering Society Building | 6 |
| **Raritan Valley** | "Organization & Management Development Problems" | Harry M. Hopkins | Vice President, Operations The Tool Steel Gear & Pinion Co., Cincinnati, Ohio | Roger Smith Hotel | 19 |
| **Reading** | "Organization Planning For Integrated Decision Making" | M. E. Salveson | Operations Research & Synthesis, Consulting Service | Iris Club, Wyomissing, Pa. | 10 |
| **Richmond** | Some Phase of Labor-Management Relations | | | Holloway House | 25 |
| **Tr.-Del. Val.** | "Human Relations" | Mr. Jordon | Sun Oil Co. | Hotel Hildebrecht | 18 |
| **Twin City** | Report & Critique Study Group III | | | Normandy Hotel | 13 |
| **W. No. Carolina** | Seminar & Work Courses, Monday Nights | | | | 3, 10, 17, 24 |
| | Technical Study Courses, Friday & Saturdays | | | | 7 & 8, 14 & 15, 21 & 22, 28 & 29 |
| **West. Mass.** | "Air Force Management" | Major John A. Hindley | U. S. A. F., Director of Comptroller, Westover AFB, Chicopee Falls, Mass. | | 19 |
| **Wilmington** | "Effective Management Thru Documentation" | Dr. Mortimer Taub | President, Documentation, Inc. | Lord de la Warr Hotel | 11 |
| **Worcester** | Joint Meeting with PDC "What Is New In Supervisory Training?" | Otis D. Brown | Training Director, Bankers Trust Co. | Worcester Airport | 17 |

# American Business Is NOT Efficient

by Clifton Bruce

Systems Analyst
Wheeldex & Simpla Products, Inc.
New York

THE efficiency of American business is a myth, at least insofar as most office system, procedure, and filing practices are concerned. Efforts to ease the situation usually prove abortive because the basic causes are little understood. The purpose of this article is to explore some areas of this field.

The principle difficulty, which gives rise to most of the others, is the simple fact that management, on the whole, is all but divorced from this portion of its business — a divorcement based on incompatibility, easy to understand when we consider the character of day-by-day office work and then consider the character of management. Office work is routine, the constant repetition of the same small tasks again and again, dull, drab, and deadly monotonous. Management is composed of people with greater intellectual capacity than the average; those who have more drive, vigor, aggression and ambition; those who relish risk for the sake of gain; those who want to know what is on the other side of the mountain. It would be absurd to expect those so endowed to be interested in routine. Big minds seek and must have big problems, the excitement of risk and challenge. Routine is boring to such minds.

In addition, many persons in top management positions do not consider the office function as part of their responsibility. That is understandable because top management is, and must be, primarily concerned with planning and policy. It is unfortunate because, whatever the cause, the attitude of indifference, often amounting to apathy, is reflected right down the chain of command to the lowest executive position. There are few junior executives, or even lower ranking executives of long service with a company, who have the temerity to make an important issue of any phase of a company's activities which the higher echelons of command brush aside as inconsequential. Usually, lower levels of command accept as doctrine the attitude of their superiors and are mentally conditioned to accept as right and best that which the brass accepts or orders.

The attitude of indifference is by no means necessarily deliberate. The aggressive leader who rises fast, spends little time at the clerical or just above the clerical level, is intent upon his work, studies it, masters its intricacies, and moves up. He has great capacity and uses it, but he does not tarry by the way to study side issues, does not permit himself to be diverted from the major tasks to which he is assigned. He passes right through the office system without seeing it.

In recent years all business activity has become enormously complex, surrounded and governed by laws, regulations, and restrictions undreamed of in, say, 1930. As a consequence the time top management once had to devote to its own internal affairs has been seriously curtailed. A straightforward business decision, time consuming under any circumstances, is now dependent on laws and judicial findings, often contradictory, which must be studied and carefully weighed before any action can be taken. Attention must be paid, with more care than ever before, to events in remote corners of the world. A drought in Manitoba, floods in Texas, or a rise or fall in Brazilian coffee prices, can have serious repercussions on businesses apparently far removed

**CLIFTON BRUCE has been in his current position since 1950. From 1946-50 he was with Shelby Salesbook Company. Prior to this he served the U. S. Army, entering service in 1941 as a private. He was commissioned in December 1942 and left the service in 1945 with the rank of 1st lieutenant. Before joining the armed forces at the beginning of World War II Mr. Bruce was for some years affiliated with the Houghton Mifflin Publishing Company. He attended New York University, where he majored in Economics, and Columbia University where he studied Personnel Management. He has been guest speaker at Hofstra College several times during 1955-56 to Business Administration classes.**

from such events.

The loss of executive time due to outside interference came about during the period of tremendous growth of business activity. In 1930 our gross national product amounted to 91.1 billion dollars; in 1945 it rose to 213.6 billions; and in 1956 to 412.2 billions. Part of the dollar increase has been due, of course, to the post war inflationary spiral but even if we adjust for that, using the 1947 dollar as our average, the precentages of increases are; 1945 over 1930, 95%; 1956 over 1945, 26%; and 1956 over 1930, 144%. Handling that amazing and gratifying increase through plant and warehouse expansion, finding and maintaining new and old sources of raw material supply, negotiating with unions, planning for future expansion with a weather eye cocked for a possible recession, and holding a company's competitive position in a market growing ever fiercer, would be difficult under what used to be called normal conditions. Doing all these things with severely curtailed executive time has placed a grave strain on all concerned.

MORE important in many ways than the loss of executive time is the reduction in the time worked on the clerical level, a reduction which has come about without being fully apparent. In the early thirties relatively few offices were closed on Saturday morning. Now, with the exception of retail establishments, there is hardly an office to be found open on Saturday. Counting two weeks per year as vacation the universal Saturday closing has meant a reduction of twenty-five work days per employee per year. We have, as well, more holidays and an astonishing increase in non-holiday closings. (During the 1956-57 year end season almost every major firm in New York City closed its doors the Monday before Christmas and at least half of them closed the Monday before New Year's Day as well. The result was two consecutive three day weeks at the end of one fiscal year and the beginning of another. The blizzard of paper work which followed was a good deal worse than most New Year's Eve hangovers.) Our labor force has grown from 45,400,000 in 1930 to 52,800,000 in 1945 and finally, to 64,900,000 in 1956, a percentage increase of 43%, 1956 over 1930. If the man hours of work per person performed had remained at or near the level of the 1930 figure of approximately 44 hours per week the present labor force might be able to do the work required but Saturday closings, coffee breaks, and other idle periods have made the 30 hour week a reality in many offices. The total number of man hours of work performed in offices to-day is, therefore, hardly any greater than the total 1930 work hours. Our 43% greater labor force is trying to handle 144% more business, but working few more total hours to do it.

Shorter working hours, coffee breaks, holidays and non-holidays are very pleasant and unquestionably contribute to increased individual efficiency, which should be reflected in over-all office efficiency through higher morale and decreased physical fatigue. The increase is highly illusory, however, because the office has failed to keep pace with the factory in providing modern, up-to-date equipment with which to perform tasks at hand. Industry spends many thousands of dollars annually in research to devise, perfect, and purchase new tools to do new and old jobs; spends money feverishly for tools or machinery which will save seconds or pennies on any operation. Factories are designed from the ground up to insure the utmost re-


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*Dr. Stanley Block*, Ind. Engrng. Div., University of Minnesota, Minneapolis

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*Emil Adamec*, Dir. of Standards, Corn Products Refining Co., Argo, Ill.

**Incentive Systems**

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*Eric A. Carlson*, Mgr. of Standards, Production Dept., Ralston Purina Co., St. Louis, Mo.

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*R. J. Devaney*, District Mgr., Albert Ramond & Associates, Chicago

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*Robert W. Galvin*, Pres. Motorola, Inc., Chicago

OPERATIONS RESEARCH—A Practical Approach
*Edward A. Mahoney*, O. R. Specialist, Hotpoint Co., Chicago

A LOOK AHEAD
*Mason Smith*, V. P. Whirlpool Corp., St. Joseph, Mich.

IDEAS FOR THE ASKING
*Herb Daniels*, Adv. Exec., Tatham-Laird, Inc., and Columnist, Chicago Tribune

OPERATION FEEDBACK
*Dr. Bess Sondel*, Prof. Lecturer in Communication, Univ. of Chicago & Consultant in Communication to Industry, Chicago

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turn in efficient use of floor space, equipment, and manpower. Hardly any of that effort, so demonstrably valuable in the factory, is to be found in office practice. There appear to be three main reasons for this contradictory situation.

First, top management indifference, to which reference has already been made. If it is unwise—and it most certainly is—to advocate changes, to stand as the champion of advancement which one's superiors consider unimportant, it is sheer folly to advocate the expenditure of money to start those changes or gain those ends. The executives who deal daily with clerical problems and the clerical staff usually find one rebuff from above quite enough and so nothing is done until the situation in one department becomes acute to the point of intolerability. At that time, and in that department only, fast action is taken. Everything else goes on as before.

Second, we are trapped in our own language, prisoners of business thought and philosophy hundreds of years old. Factory workers are presumed to do some sort of mechanical work. Office help does clerical work. We expect to provide tools for mechanical work but not for clerical. Rosie-the-Riveter is a member of the working class and uses tools as her name implies. Miss Rose, who works in the office and is a member of the clerical staff, is not supposed to soil her hands and she most certainly is not supposed to use tools. But she does. A tool is any implement used to facilitate a manual operation. Pens, pencils, card files, typewriters, computers, tabulating card equipment, erasers, staplers, and paper clips are tools. An executive's dictating machine is a tool. Inadequate tools in the hands of the most skillful and willing workers reduce the efficiency of the worker to the level of the efficiency of the tool. In thousands of first rank offices the tools in use today are from ten to twenty-five years old, the system or method of which the tools are a part sometimes dating back to office practices and procedures in vogue fifty years ago.

THIRD, the key reason is that most people know as little about system as the average driver knows about the internal mechanism of his car. Few of us have either the time or the inclination to study automobile mechanics. We turn on the ignition (open the office), engage the gears (begin work), move into traffic (settle down to the day's routine), steer and manoeuvre (manage or supervise), and buy gas and oil (purchase raw materials or supplies). The best driver (executive) can make only painfully slow progress with a faulty carburetor. An automobile is a machine made up of several mutually dependent electric and gear combinations, each a system in itself, and each carefully synchronized with all the others. Office system is the same, but most "systems" in use today are like an old car, with new or replacement parts here and there improperly adjusted to the older parts, and the whole held together with baling wire, runs with asthmatic wheezes and though it gets where it is going it is expensive to operate and agonizingly slow.

At the clerical level the opportunity to learn about system is almost nonexistent. Newly employed personnel, in their first jobs, have more than enough to do learning about their work without taking time out for idle speculation. They seek to please, to consolidate their positions rather than to interfere. Even if they chose to ask questions they have no point of reference. Can a man who never studied the language decline a French verb? Established employees are mentally shackled by habit and tradition, unaware of faults, happily content to work in the known, and therefore easy, way. Those who have seen or used better methods or equipment in other offices, those who have an inquiring turn of mind, or those who are simply curious often make suggestions and seek to improve their work. It is doubtful, however, if one suggestion in twenty receives more than the most perfunctory attention; hardly one suggestion in a hundred is adopted. Human beings fear and distrust change, cling stubbornly to established patterns of behavior. The man who wants to make changes often finds that he has gained nothing but a reputation as a radical.

SUGGESTIONS must, of course, be directed to one's immediate superior and here we run up against resentment which clouds reason, because an idea to improve the work of a department carries with it an implied criticism of that department. The man in charge quite normally considers that as a criticism of his work. Is he not in charge? Is he not responsible? No young whipper-snapper is going to tell him how to run his department. The greater the merit of the suggestion the greater the criticism it implies and the greater the resentment it develops. None of this is logical, none is deliberate; most of it comes from a grave misunderstanding. *Management* is supervision and the direction of the work of others. *System* is the mechanical means used to perform a given task. Criticism of system is not criticism of managerial capacity. Thousands of good ideas are thus denied, however, and oddly enough by those most anxious to do a good job; that is, by hard working, dynamic, aggressive management personnel. As was pointed out in the beginning of this article, management is made up of the most aggressive, forceful persons in business. No one likes to be criticized, the aggressive man least of all.

Each of the factors mentioned here has its variations, far too numerous to mention. Taken singly, any one of the reasons can and does cause trouble. Taken in concert, they mean inefficiency from the lowest clerical position to the highest executive post. And it is a great pity because the methods and tools are available to give to the office efficiency equal to or greater than that enjoyed in the factory. And when these tools and methods are put to use there will be a notable rise in business profits. ■

## "Let's Sit Down and Talk It Over"

At meetings or discussions,
One all too often finds
That its very hard to bring about
A meeting of the minds.
One cause for this dilemma
Is so simple its absurd:
The people who attend them
Never seem to "get the word".
The chairman starts the meeting
With trite comments on the weather,
Then adds "This meeting can be short
If we get our heads together."
"If we *bang* our heads together,"
Is what he should have said.
That's the only way to make it short
Unless they all drop dead!
The chairman states the problem,
But not in simple terms.
So when he asks for comments
He gets only quiet squirms.
Their reaction to his questions
Leaves him far from feeling fit,
But he says to those not dozing off
"Let's kick this around a bit."
"Let's kick *him* around a bit"
Comes to everybody's mind,
But cravenly they one and all
Just put such thoughts behind.
They independently decide
To sit the meeting out,
In vain hope he will tell them
What the meeting's all about.
But even though they do find out,
Bad feelings have resulted.
The answer isn't hard to find:
They simply weren't consulted.
When meetings such as this are called,
It pays to brief all members
So group decisions can be made
And not leave smoldering embers.

—MAX J. CHAPMAN

# S. A. M *Newsletter*

Current news of interest to all S.A.M Members, specifically for the 900 Chapter and National Officers of the Society.

HAROLD R. BIXLER
Executive Vice President

THE BUSINESS PICTURE FOR 1958—Spokesmen for 14 national associations previewed 1958 for the press as part of the recent BUSINESS OUTLOOK SYMPOSIUM Chamber of Commerce of the U .S. as follows: Air Transport Association:—1958 will usher in the jet age in air transport. By 1961 we will spend one and three quarter billion dollars for new aircraft alone. American Trucking Associations — We are guardedly optimistic. We expect a continuation of increase in truck registrations and revenues that took place in 1957. Association of American Railroads—Railroad freight traffic may decline another 5% in 1958, with passenger traffic dropping the same amount. Institute of Scrap Iron and Steel—We anticipate high steel demand in 1958, approximating 1957. National Association of Food Chains—For 1958 chain store executives foresee a 5.3% rise in total retail food sales for all stores, construction of 2,000 new supermarkets, total expenditures of $635,000,000 for new plant and equipment, employment of 50,000 additional personnel, and no increase in food prices. National Consumer Finance Association—A 10% increase in consumer credit may be expected during the coming year. Electronic Industries Association—In production and dollar volume, 1958 should exceed even the record year of 1957 for us. Associated General Contractors of America—An increase of 4% in new work to a value of $49,000,000,000 seems possible. National Retail Dry Goods Association — Department and specialty store sales the first half of 1958 will correspond to those of 1957. National Savings and Loan League—An expansion of 10% of mortgage financing in home building looks likely, assuming the Federal Reserve Board moderately eases credit. National Foreign Trade Council—The 1958 prospect is for a drop in commercial exports from 1957's record 19.5 billion to somewhere around 18 billion. National Association of Home Builders — Our forecast is for one million homes to be built in 1958. We anticipate little or no change in home sales prices. National Automobile Dealers Association—Auto sales, we believe, will rise from 6.1 to 6.2 million new units in 1958. Manufacturing Chemists Association—The chemical industry, fastest growing of major manufacturing industries and now third in total assets, should continue its rapid expansion. Record 1957 sales of 24.4 billion will rise 5% next year.

S.A.M HOSPITAL MANAGEMENT CONFERENCE—A new S.A.M Hospital Management Conference is now shaping up as part of the National Civic Affairs Program under the leadership of Vice President GEORGE GOETTELMAN. This will be held in New York City at the Hotel Commodore, and has been planned by an outstanding conference committee composed largely of administrators of leading hospitals in the metropolitan area. (See complete program on page 2 of this magazine.)

NEW S.A.M PUBLICATION: "FACTS ON WRITING FOR ADVANCED MANAGEMENT"—This handy pamphlet answers questions and covers suggestions on how to write "your best-seller" for the Society's official publication, whose readership numbers over 50,000. Contents include: You Can Do It—Editorial Policy—Mechanical Limitations—What Your Readers Want To Know—Article Techniques—Use of Charts and Photographs — What Not To Worry About—What Happens To Your Article After It Is In Print—Reprints by the Thousands. An initial quantity is being sent to each chapter, with more available on request by any interested member for use by himself or his associates.

S.A.M — I.C.A AGREEMENT COMPLETED — Official action has been taken by the U. S. International Cooperation Administration to sponsor S.A.M memberships to foreign nationals for professional and technical training in the U. S. under the Technical Assistance Program. S.A.M will endeavor (a) To establish for foreign nationals, who have shared in the training conducted in the U. S. by ICA or its predecessor agencies, effective and continuing professional follow up in specific fields of study; (b) To provide such U. S. technical literature in these special fields as may be relatively unavailable at the present in the under-developed areas of the world and (c) To stimulate, encourage and assist in promoting and developing similar professional associations overseas. These arrangements are in line with the growing interest in S.A.M's program and activities by individuals from most of the countries of the free world. New S.A.M chapter developments are now being considered in a number of them, the first having been formed last month in Maracaibo, Venezuela.

INDUSTRIAL RELATIONS NEWS—SAM BURK, the Society's National Vice President for Industrial Relations, highly recommends the source material available in the Annotated Bibliography for Industrial Relations Directors, compiled by Michigan State University. This Bibliography grew out of a research project on the managerial aspects of industrial relations. The purpose of the two year pilot study was to lay the foundation for a closer integration of management thinking and principles with ideas and practices in industrial relations and collective bargaining. The library and field research centered around the top industrial relations of personnel director and his problems. Major areas of the research include (1) human relations in contract negotiations; (2) relationships of the industrial relations director to superiors, subordinates, and executives at his own level; (3) special problems arising out of the application of the staff concept to personnel work; and (4) elements of job satisfaction in top-level personnel work. The purpose of this Bibliography is to provide those who are interested in industrial relations with a ready source of information concerning the available writing on the subject and the place of the industrial relations function in the field of management. An effort has been made to provide a comprehensive list of the best and most useful items. Copies may be obtained by writing D. E. McFARLAND, Labor and Industrial Relations Center, Michigan State University, East Lansing. As reported in NATION'S BUSINESS, DEVEREUX C. JOSEPHS, board chairman of the New York Life Insurance Company, says new products, methods and tools are changing skill requirements so rapidly that it is useless to try to prepare personnel for unknown skills or to expect the schools to do so. He suggests that industry and business teach the specifics to employees having general competence, as the new needs arise. A study now in progress, he says, shows that there are as many people enrolled in education and training programs in industry as are now enrolled in all U. S. colleges and universities. Three new publications are now available from the U. S. Department of Labor entitled FEDERAL LABOR LAWS AND AGENCIES, TURNOVER AND ABSENTEEISM, and LABOR SHORTAGES. They may be obtained from LEWIS D. BARTON, Chief, Industry Relations Branch, Bureau of Employment Security, U. S. Department of Labor, Washington 25, D. C. S.A.M TWIN CITY Chapter again co-sponsors 16th Annual Industrial Relations Conference with University of Minnesota at Minneapolis, on April 17-18.

"HOT DOG, MISTER?"—Ammunition to combat undue pessimism on business conditions can be obtained in the following excerpt from the publication of the GEORGE TRUNDLE Organization, as reprinted by courtesy of "The Reporter of Direct Mail Advertising." . . . "There was a man who lived by the side of the road and he sold hot dogs. He was hard of hearing so he had no radio. He had trouble with his eyes so he read no newspapers. But he sold good hot dogs. He put signs up on the highway, telling how good they were. He stood on the side of the road and cried, "Buy a hot dog, mister?" And people bought. He increased his meat and bun orders. He bought a bigger stove, to take care of his trade. He finally got his son home from college to help him. But then something happened. His son said, "Father, haven't you been listening to the radio? Haven't you been reading the newspapers? There's a big depression on. The European situation is terrible. The domestic situation is worse. Everything's going to pot." Whereupon the father thought, "Well, my son's been to college, he reads the papers and he listens to the radio, and he ought to know." So the father cut down on his meat and bun orders, took down his advertising signs, and no longer bothered to stand out on the highway to sell his hot dogs. And his hot dog sales fell almost overnight. "You're right, son," the father said to the boy. "We certainly are in the middle of a great depression."

DISTRIBUTION DATA GUIDE—S.A.M National Vice President for Marketing, AL N. SEARES, calls attention to the valuable information in the No. 12 issue of DISTRIBUTION DATA GUIDE, available from the Office of Distribution, Business and Defense Services Administration, U. S. Department of Commerce, Washington, D. C. It contains the following features: ACTIVITIES AND SERVICES OF THE FEDERAL GOVERNMENT IN DISTRIBUTION RESEARCH, ANALYSIS OF LONG-TERM MARKETS—MEASURING PRODUCT TRENDS AND POTENTIAL, COUNTY AND CITY DATA BOOK, INVENTIONS WANTED BY THE ARMED FORCES, ANNUAL TIME TABLE OF RETAIL OPPORTUNITIES, BOSTON CONFERENCE ON DISTRIBUTION, 1957, MARKETING'S ROLE IN SCIENTIFIC MANAGEMENT, and 108 other annotations of selected current materials of value to those marketing and distributing our Nation's goods and services.

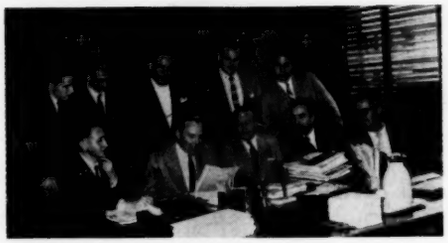
NATIONAL OFFICE MAILINGS — All 900 Chapter and National Officers are reminded to check their particular interests in the following combined mailings sent Chapter Presidents and National Directors since the last listings, and to broadcast the particular information they contain in line with their specific purposes: Committee on Management Women in S.A.M, Plant Management Case Book, Official S.A.M Gavel, Hospital Case Study No. 05-02-1, Housekeeping and Personnel, and Official S.A.M "Blue Book" changes in listings of Chapter Officers since July 1. The last item includes changes of address, replacements, or additions of functional officers, with data sheets for new chapters.

**ADVANCED MANAGEMENT'S NON-MEMBER READERSHIP INCREASING—The Society's official monthly publication, ADVANCED MANAGEMENT, continues to grow in the high regard in which it is viewed by non-members, as well as members, as a leading management publication. It now goes to approximately 18,000 members, subscribers, and exchange organizations each with combined readership of over 50,000 management people. Individual subscribers, who are not in a position to be members, have increased 39% during the last three years and now number over 2,000. ADVANCED MANAGEMENT is consulted by more and more forward thinking management executives for its assistance on current business problems, better methods and principles, and developing new management research, among the other classifications of its content.**

S.A.M MATERIALS AND SUPPLIES—A new Society publication is now in preparation, designed to include handy source reference and order information for the relatively large number of materials, supplies, publications and other member and Chapter aids available from the National Office. S.A.M headquarters acts as a clearing house for the exchange of ideas and operating practices among the chapters, and also distributes selected information of use to the chapters obtained from outside sources. Now included in a broadening program of liaison, cooperative contacts and participation are such leading organizations as U. S. Chamber of Commerce, National Association of Manufacturers, National Industrial Conference Board; principal technical and professional societies; various colleges and universities and other educational institutions; local state and federal governmental agencies, including U. S. Department of Commerce, Small Business Administration and U. S. Department of Defense.

**1958 MANAGEMENT ENGINEERING CONFERENCE—The program for the 13th Annual S.A.M-A.S.M.E Management Engineering Conference has now been completed and the flyer is scheduled for mailing about the middle of February. This outstanding annual event will be held at the Hotel Statler, New York City, April 24-25 under the theme "Making Management Engineering Pay Off. (See page 31 for complete program.) Some 18 key addresses will be given during the two day conference by outstanding authorities in related fields of management engineering, as selected by this year's committee under the co-chairmanship of OLIVER J. SIZELOVE, representing S.A.M and VICTOR A. GROVE, representing A.S.M.E. Overall arrangements are being handled, as usual, by S.A.M Conference Director, PATRICK J. REDDINGTON.**

MATERIALS HANDLING NEWS — S.A.M Materials Handling Vice President WARREN KING points out that long range planners in this field will want to make note of the 1959 National Exposition of Material Handling Equipment by the Material Handling Institute, to be held in Cleveland's public auditorium June 9 through 12, 1959. S.A.M is a co-sponsor, along with the Material Handling Section of the A.S.M.E and the American Material Handling Society, of the technical sessions to be conducted in conjunction with the exposition. E. W. McCAUL, Chairman of the Technical Sessions Committee states, "We believe the combining of practical applications with engineering and management phases assures outstanding educational meetings for visitors at the All-Industry Exposition." Of more immediate interest is the one week Materials Handling Course to be held in Kansas City March 3-7. This is co-sponsored by the KANSAS CITY S.A.M Chapter and the University of Kansas, and will be conducted by National Director RICHARD MUTHER, assisted by several nationally known specialists in this field, including PROFESSOR JAMES R. BRIGHT, ERIC A. CARLSON, IRVING M. FOOTLIK and ROBERT S. RICE. The theme is "Midwest Work Course on Materials Handling Analysis."



PATRICK J. REDDINGTON (2nd from left, seated), S.A.M National Conference Director, entertains group of visiting businessmen from Mexico. Frequent visits to the National Office are made by management representatives from such countries as Australia, Belgium, England, Germany, Japan, New Zealand, Spain, and various South American countries.

**MANAGEMENT GUIDEPOSTS FOR 1958 — Thanks to CLIFFORD C. JAMES, former National Director, BALTIMORE Chapter, for the following inspiring statement illustrating another keystone in S.A.M's national program: "Never before in history was sound management more important than it is today. In prosperous times it is easy for us in management at all levels to become lax, yet that is the very time when management should be most vigilant. Management is a fluid function which must change with its needs, development and growth. A business develops entirely different management problems as it rises or drops from one volume level to another and these problems require entirely different knowledge for solution. With economic changes in our dynamic free enterprise economy, where competition is the order of the day, sound coordinated management is a must and facts and knowledge are just as vital as enterprise. You have no foundation for sound management unless you know the facts influencing your business, such as your market potentials, your production and sales abilities to obtain your share of potential business, how to coordinate your sales and production functions for profit planning, and how to utilize every square foot of space and every piece of equipment, your manpower, and all other attributes of your business to the fullest."**

"DYNAMISM — MANAGEMENT ON THE MOVE" is the theme of the Proceedings of the excellent annual 1957 conference conducted by the S.A.M MILWAUKEE CHAPTER. This 52 page publication is loaded with value on the session subjects: Production, Scheduling, Measurement of Indirect Labor, Accident Prevention, Timely Equipment Replacement, Personal Development, Office Efficiencies, Work Simplification, Profit Sharing, and Management Development. For copies write to: Donald E. Cox, Milwaukee Chapter President. Members: $1.50 per copy. Non-members: $2.00 per copy. ■

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***John S. Sayer,*** *Mgr., Integrated Engineering Controls, Engineering Dept., E. I. du Pont de Nemours, Wilmington, Del.*

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***Phil Carroll,*** *Registered Engineer, Maplewood, N. J.*

**ECONOMICS OF PREDETERMINED TIMES VERSUS STOP WATCH TIMES**
***George E. Kane,*** *Asst. Professor, Industrial Engineering, Lehigh University, Bethlehem, Pa.*

***Luncheon***

**"A LITTLE SLEEP, A LITTLE SLUMBER?"**
***Robert W. Van Houten,*** *President, Newark College of Engineering, Newark, N. J.*

### *THURSDAY P.M.*

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***John M. Allderige,*** *Technical Advisor, Industrial Engineering Div., Eastman Kodak Co., Rochester, N. Y.*

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***W. C. Cooling,*** *Chief Industrial Engr., Engelhard Industries Inc., Newark, N. J.*

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***R. T. Studer,*** *Administrative Engr., The Warner & Swasey Co., Cleveland, Ohio*

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***David Lasser,*** *Director of Research & Education, International Union of Electrical, Radio & Machine Workers, AFL-CIO, Washington, D. C.*

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**WHAT IT TAKES TO BE A GOOD ADMINISTRATOR**
**John Hite,** Training Director, Johnson & Johnson, New Brunswick, N. J.

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**Lt. James Kelly,** USN Rtd., Naval School, Hospital Administration, Bethesda, Md.

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**Donald V. Schoeller,** Director of Executive Development, Remington Rand, New York

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**THROUGH BETTER ACCOUNTING METHODS**
**John H. Beddow,** Director, Middlesex General Hospital, New Brunswick, N. J.

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**Sister Ellen Patricia,** Administrator, St. Elizabeth Hospital, Elizabeth, N. J.

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**Paul Cox,** Personnel Director, Hercules Powder Company, Parin, N. J.

**Luncheon Speaker**

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